



Formal and informal European quality assurance initiatives offering a connection between local gastronomy and small-scale farmers

Allison Loconto, Francisco Garrido-Garza

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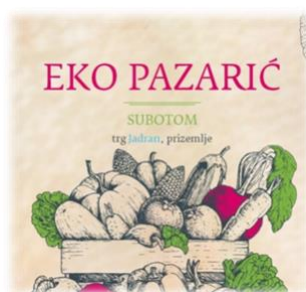
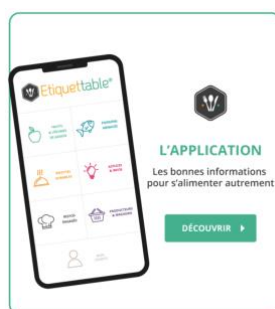
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Laboratoire Interdisciplinaire Sciences, Innovations et Sociétés (LISIS)

Formal and informal European quality assurance initiatives offering a connection between local gastronomy and small-scale farmers



Final report

25.01.2021



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Acknowledgements

AGRI KULTI is an independent and non-governmental organization located in Hungary, dedicated to the creation and development of projects focused on rural development and innovation, and local gastronomy. Since its foundation (2011), it has been creating and implementing sustainable business models in the areas of agri-food and agro-tourism.

The Interdisciplinary Laboratory for Science, Innovation and Society (LISIS) is an interdisciplinary research centre devoted to the study of **science and innovations in society** and is specifically renowned for its expertise on **agri-food systems** and **certification**. It brings together 35 researchers and professors and 30 PhD and postdoctoral fellows from three core research disciplines: science and technology studies (STS), organization studies and digital studies. Its staff is employed by Gustave Eiffel University (UGE), the French National Research Institute for Agriculture, Food and Environment (INRAE) and the French National Centre for Scientific Research (CNRS). The project team was led by Dr. Allison Marie Loconto, Deputy Director of LISIS and Senior Researcher at INRAE and included Mr. Francisco Garrido Garza, PhD. candidate INRAE/UGE.

Acronyms

B2B	Business to business
CNRS	French National Centre for Scientific Research
EC	European Commission
EU	European Union (27 member countries)
INRAE	French National Research Institute for Agriculture, Food and Environment
LISIS	Interdisciplinary Laboratory for Science, Innovation and Society
PGS	Participatory Guarantee System
SDO	Standards Development Organisation
SFSC	Short food supply chains
STS	Science, technology and society
TPC	Third-party Certification
UGE	Gustave Eiffel University

Introduction

Background

Since the turn of the 21st century, short food supply chains (SFSC) (Renting et al., 2003; Marsden et al., 2000) and values-based food chains (Ostrom et al., 2017) have emerged across Europe as an increasingly popular means to create closer linkages between producers and consumers. While the European Union (EU) average for farms selling more than half of their production direction to consumers is near 15 %, this is distributed unevenly among member nations and is largely restricted to small farms (Augère-Granier, 2016). This report argues that direct sales had minor importance in Malta, Austria and Spain, where supermarkets dominate food retail with more than 90% market share. However, direct sales, traditional specialty shops and food markets are very important in other countries. Direct sales account for 25% in Greece, 21% in France, 19% in Slovakia and around 18% in Hungary, Romania and Estonia (Augère-Granier, 2016). In addition, a nationally representative survey in France found that 42% of consumers had purchased food through a SFSC during the month prior to the study (Loisel et al., 2016).

SFSCs are considered to be short based on criteria of social and geographic proximity. Kneafsey et al. (2013) put forward the following definition – based on French ministerial and the European Commission (EC) definitions – in order to separate these initiatives from conventional food chains.

“The foods involved are identified by, and traceable to a farmer. The number of intermediaries between farmer and consumer should be ‘minimal’ or ideally nil.” (p. 42).

Recent consumer research demonstrates that trust-worthiness of food chain actors and the openness of food manufacturers are strongly related to consumer confidence in food (Macready et al., 2020). Thus, the assumption of SFSC promoters is that this greater transparency translates into greater consumer confidence in producers and as a result more social, equitable and fairer trading practices between producers and consumers.

Quality assurance and certification are the most common means used to communicate transparency and openness in both conventional and sustainable supply chains (UN environment, 2017). Prior research demonstrates that there are a variety of ways in which assurance and certification can be organized in order to credibly guarantee quality (Loconto, 2017a).

Within this context, the Hungarian Ministry of Agriculture has commissioned AGRI KULTI to develop an information and quality assurance system, that identifies management patterns across the connection of local production and gastronomy, both in Hungary and in the European Union (Food Track project). For this reason, a comprehensive and comparative data analysis is required. Thus, this study consisted of exploring and analysing initiatives, businesses or organizations in the EU that can be classified as SFSCs and that communicate their sustainability quality attributions (e.g., organic, local, healthy, agro-ecological, traditional, etc.) through a variety of forms of certification.

Research aims and objectives

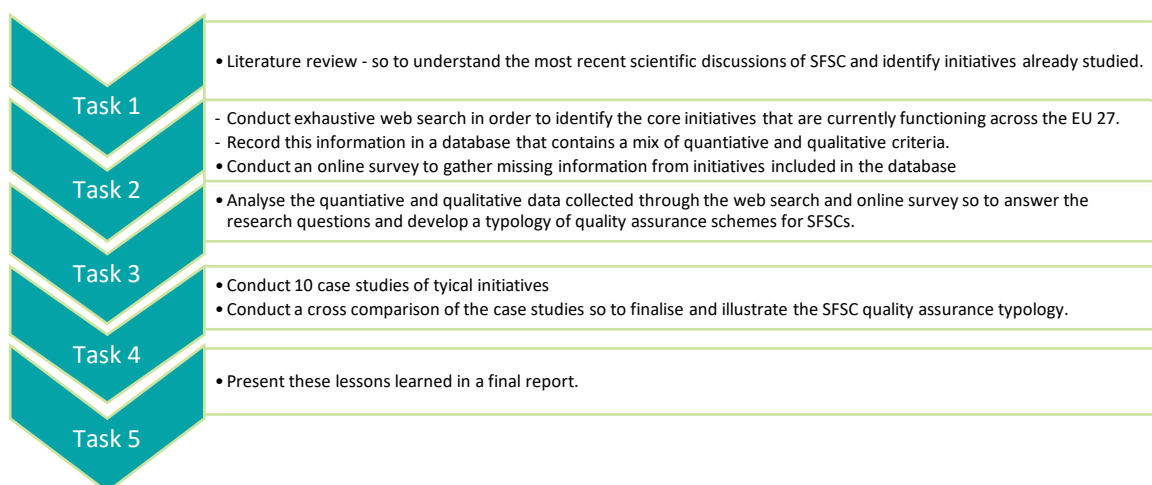
The aim of this study is to improve our understanding of how to reconnect cities and rural areas by establishing transparent and close links between local (and small-scale) producers with urban gastronomy. In order to achieve this aim, the following objectives were established:

1. Conduct a baseline study of quality assurance and information systems used across Europe in short circuit food chains using internet resources and an online survey when feasible
2. Elaborate 10 in-depth case studies that analyse the types of qualities and forms of quality assurance that have worked in practice

The achievement of these objectives is guided by the following open-ended research questions and will be realized through the tasks outlined in Figure 1:

1. What food qualities are traded in SFSCs?
2. What is being assured in terms of quality?
3. How are intermediaries organized when it comes to shortening supply chains?
4. What can we learn from specific cases so to build a successful platform in Hungary?

Figure 1 : Project Tasks



Methodology

We have developed a research methodology that triangulates data through a systematic literature review, an exhaustive web search of initiative's websites, an online survey, and case studies that include semi-structured interviews. Qualitative and quantitative analysis was conducted across this data and have been used to develop a typology of initiatives and draw lessons learned for the Hungarian situation.

Literature review

We used the CorText¹ platform for socio-semantic textual analysis to conduct a robust systematic literature review of the SCOPUS database, which is the most complete bibliographic database for scientific research in the social sciences. We focused on two bodies of literature: 1) SFSCs and alternative agri-food networks in economics and rural sociology; and 2) standards and certification in international relations and political economy. This systematic literature review was carried out following the method previously developed by the LISIS team leader (FAO; Loconto et al., 2019). We used the following keywords to identify relevant literature in the SCOPUS database:

TITLE-ABS-KEY ("alternative agri-food networks" OR "short food supply chain" OR "circuit court" OR "local food system" OR "quality turn" OR "certification" OR "participatory guarantee systems" OR "participatory certification" OR "farm to fork") AND (LIMIT-TO (SUBJAREA , "SOCI") OR LIMIT-TO (SUBJAREA , "ENVI") OR LIMIT-TO (SUBJAREA , "AGRI")) AND (LIMIT-TO (SUBJAREA , "BUSI") OR LIMIT-TO (SUBJAREA , "ECON") OR LIMIT-TO (SUBJAREA , "ARTS")).

This search resulted in a corpus of 3,533 documents. After eliminating those article that were not in the agriculture, food or environment domain (e.g., teacher certification and education, court certification and interpretation, language certification, vehicle certification, court certifications, healthcare), we were left with a database of 2,397 references. We imported these into the CorText Manager software in order to characterize the content of the database and conduct sociometric analysis. We mapped out the scientific networks to identify saturation and repetitions, as well as present the state of the art on the nature and efficacy of quality assurance in short food supply chains.

Web search, database composition and online survey

This task enabled us to capture the landscape of current web search, database composition and the development of an online survey that will facilitate data collection. The details of the data collection process, the database parameters, survey questionnaires, GDPR compliant consent form and case study interview guides are found in Appendix A of the final report.

We developed two databases through this research. The first is the contact database, which consist of 695 initiatives in 27 countries (see Table 1). This database consists of the name, country, email, website and FACEBOOK pages for each initiative. We used this database to send an email invitation to all 692 to fill in the online survey that we developed. 27 initiatives responded by completing the online questionnaire (response rate of 4 per cent). By web scrapping data from the websites, we were able to complete the questionnaires for an

¹ <https://www.cortext.net/>

additional 44 initiatives, resulting in a database with 71 completed entries (representing roughly 10 per cent of the initiatives). Webscrapping means that we copied information from the initiative's websites and FACEBOOK pages, so this text remains consistent with their own words.

We conducted quantitative and qualitative analysis of our interview data using CorText, NVivo and IRaMuTeQ software packages. These enable qualitative analysis of texts based on algorithms that find statistically significant relationships between words within a linguistic logic of a written text (e.g., co-occurrences). Based on our conceptual framework that focuses on understanding the organization, trust and openness of the SFSC initiatives, we conducted thematic coding of the qualitative data in order to respond to our research questions. We will also link the online survey responses from the to the initiatives' data to see if there are any trends between our data analysis parameters.

Typology of quality assurance schemes

Based on the analysis of the database, a typology of quality assurance schemes used in SFSCs will be developed. This typology is based on a mix of process dimensions and of situational dimensions and are derived from the conceptual framework that drove the identification of the variables included in the online survey and database. For each type of quality assurance, enabling and limiting factors will be discussed. The factors that enable SFSCs to inspire trust and openness between producers and consumers are highlighted in the results section.

Typical case studies

We adopted a "multiple-case design" (Yin, 1984) based on a method developed by the lead author in the Res-AGorA and Innovative Markets projects (Lindner et al., 2016; FAO, 2016). This method consists of conducting case studies that collect qualitative and quantitative data on processes, rules and organizational practices that can be compared across the cases. Based on the identification of patterns and outliers in the initiative database, we will purposively selected (Patton, 1990) 10 different cases that enable us to identify commonalities across contextual differences and to represent some of the key characteristics of the quality assurance practices found in the database. We organise these 10 cases in the report according to the typologies developed in Task 3 in order to enable us to better understand typical challenges and mechanisms that are replicable.

Limitations of the study

The limitations of this study were 1) low response rates to survey solicitations, 2) short time-line available for field work and data collection, 3) language barriers and limited capacity, and 4) knowledge of initiatives that needs to be taken into consideration.

The data collection process consisted of collecting data from the participants' inputs through an online survey. The response rate (4%) is lower than average for online survey (10%). This may be because the topic of study was not of interest, not compensated, or was not considered appropriate (as indicated by some of the comments received in the completed surveys). Reasons of their unwillingness are unknown despite being reminded up to 3 times every 10-15 days. Also, the ongoing global pandemic situation at this time, surely exacerbated this low response rate as many people had to limit their business activities, reduce operations, and even suspend or close as data collection took place during two periods of lockdown.

Another limitation was the length of time established for the research, particularly data collection. The ambition of covering the entire EU27 was too ambitious for the time frame. The activities within this process – from search and selecting initiatives, through contacting and processing data – were highly high time-consuming, which therefore prolonged the planning for this stage that was set to 2-3 months, and hence shifted our deadlines. In this sense, some responses came only in January 2021 from a few initiatives, while developing the report, which made us to re-update the data sets, and hence to re-perform data analyses which caused modifications because of the changes in the results.

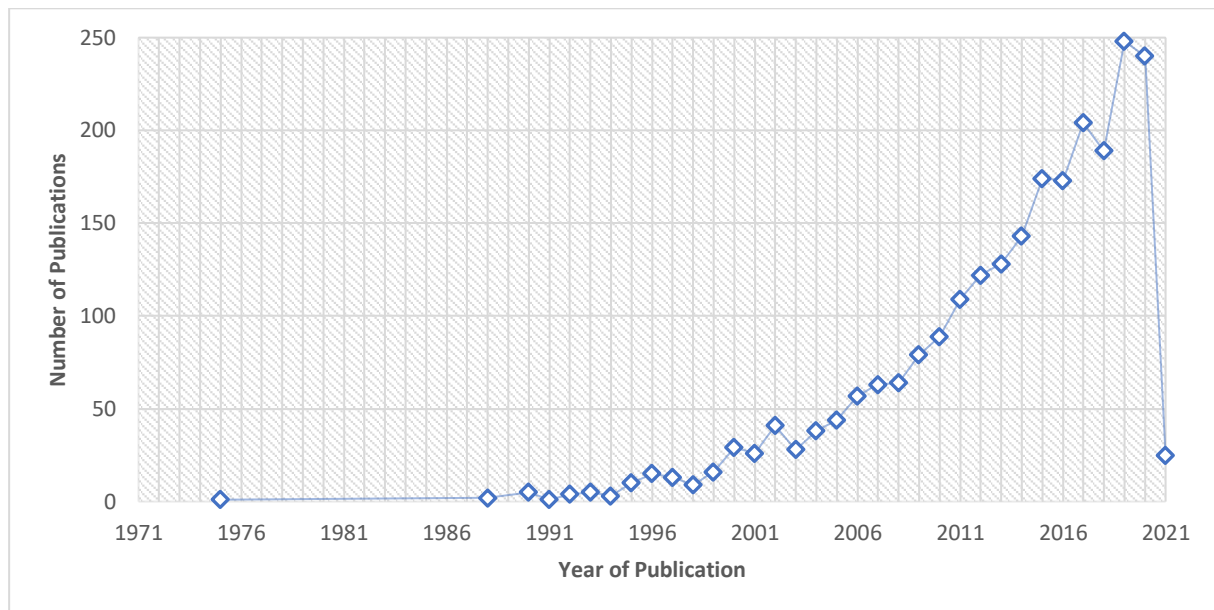
Throughout the process, language was a barrier when it came to searching and contacting initiatives, as well as reading information on websites that were not in English or in any of the languages spoken by the research authors (French, Italian, Spanish and Portuguese). In order to have both an invitation message and survey questionnaire (Appendices A & B) directly and accurately translated from the original version (English), voluntary assistance of native speakers was key and essential. By that way, both files were translated in German, Dutch and Greek thanks to volunteers that were reachable in a matter of time and proximity. But for the other languages, it was not feasible due to time limitations and for requiring additional resources and time to locate and hire translators as a matter of urgency.

Since the overall response rate was about 4% (see Results – Descriptive statistics from the database), an alternative way of obtaining data was implemented. We consider this task as the most time consuming for the fact that it required exhaustive exploration of websites (web scrapping) in order to ensure it has sufficient and relevant information from which it could be extracted and, at least, fill the most essential parameters (columns) on the database. For this method, a protocol was developed (see Appendix A). We thought that, to increase the data, this method was essential although not always precise and complete when it came to responding to all of the survey questions – as some questions could only be completed by respondents. For example, in most cases, it was not feasible to find information such as monthly income, or any evidence that likely occur in the initiative although not shown or mentioned in its website (e.g. agronomic practices, weaknesses, consumer-quality feedbacks, farm-to-fork traceability, economic sustainability etc.).

State of the art in short food supply chains and quality assessment

The concerns of quality assessment and short food supply chains are mainly the purview of food science, food policy, business ethics, geography, rural sociology, sustainability sciences, ecological and development economics. The first studies on quality assessment or short food value chains appeared in 1975, but only began to increase continuously around 2000 (**Figure 2**). This first study presented, quite possibly for the first time, an analysis of the role played by consumer-facing seals and certifications symbols in the decision-making process (Parkinson, 1975). The focus on consumer recognition of labels has since become quite important since that time and a significant amount of research conducted upon consumer behaviour and consumer preferences – particularly related to ethical and other green or sustainability labels (425 articles). This trend emerges from studies in marketing that have assessed the ability of consumers to be able to recognize specific labels and to ignore those that don't add significant information (Drugova et al., 2020). The use of purchasing practices by individual consumers as a means to make a political statement, complemented by the increase in celebrity chefs who take a political stance (Phillipov and Gale, 2020), has only grown since it was first theorised in 2005 (DuPuis and Goodman, 2005).

Figure 2: Publications on quality assessment and SFSC



Source: Scopus database core collection based on keyword extraction.

According to Schenk et al. (2016) consumer purchasing power does not influence the national sales of ethical products, but moral convictions and the range of products available for sale (in supermarkets) are consequential. Market growth for ethical or green products therefore depends crucially on whether or not supermarkets include these products in their range. A recent report from the International Trade Centre (2019) found that European retailers give high priority to sustainable product sourcing, as they assume strong consumer support and expect sustainable businesses to increase significantly in the coming years. According to this report, 96 percent of retailers interviewed have sustainable sourcing strategies, but it remains unclear in the literature why companies choose one label over another, and many develop

their own quality assurance schemes (Chkanikova and Lehner, 2015; Chkanikova, 2016). What seems clear, however, is that supermarkets can choose between competing sustainability alternatives (Arnold & Hasse, 2015; Reinecke et al., 2012).

The most recent EuroBarometer special reports (2020)² asked citizens about their priorities in purchasing food. Their results are quite important for this study as overall, Europeans prioritise Taste (45%), food safety (42%) and cost (40) over sustainability concerns when purchasing food. The remaining characteristics follow in terms of order of importance: origin of the food (34%), nutrient content (33%), product shelf-life (20%), “minimally processed” (16%), personal “ethics and beliefs” (e.g., animal welfare concerns) (16%), and “environmental and climate impact” (15%). Surprisingly, “convenience” (9%) is the least influencing factor – which indicates a shift from the supermarket mentality among consumers.

Food is “sustainable” when it is nutritious and healthy (41%), it has been produced with little or no use of pesticides (32%) and when it is affordable for all (29%). “Local or short supply chains” (24%) and “low environmental and climate impact” of food (22%) remain important characteristics of sustainable food systems but are not as important as the notion of a healthy diet for them as consumers (74%). The latter is described as eating a “variety of different foods, having a balanced diet” (58%) and “eating more fruit and vegetables” (58%). A healthy diet is seasonal (50%), local (47%), and consist of “eating more home-cooked meals” (43%), with “little or no pesticides” (43%), “avoiding wasting food” (42%) and “avoiding or not eating too much food high in fat sugars and/or salt” (40%).

The 2020 State of Food Insecurity Report from FAO introduced a global metric for healthy diets and claimed that 3 billion people around the world could not afford a healthy diet and 18 million of them lived in North America and Europe (FAO et al., 2020). According to the Eurobarometer survey in 2020, Two thirds of Europeans say that they eat a healthy and sustainable diet most of the time (56%) or always (10%). However, there are significant differences across Member States, ranging from the top range in the Netherlands (83%) and Finland (81%), to the low range in Bulgaria (32%) and Lithuania (46%). Affordability and availability of healthy, sustainable choices and clear information on food labelling are the recommendations from this report. The historical literature suggests that information and labelling can only go so far (Bullock and van der Ven, 2020); and recent studies argue that closer interactions that produce trust, shared visions and mutual responsibilities among food system actors are promising avenues for increasing the impact of labels (Nakandala et al., 2020; Hebinck et al., 2018).

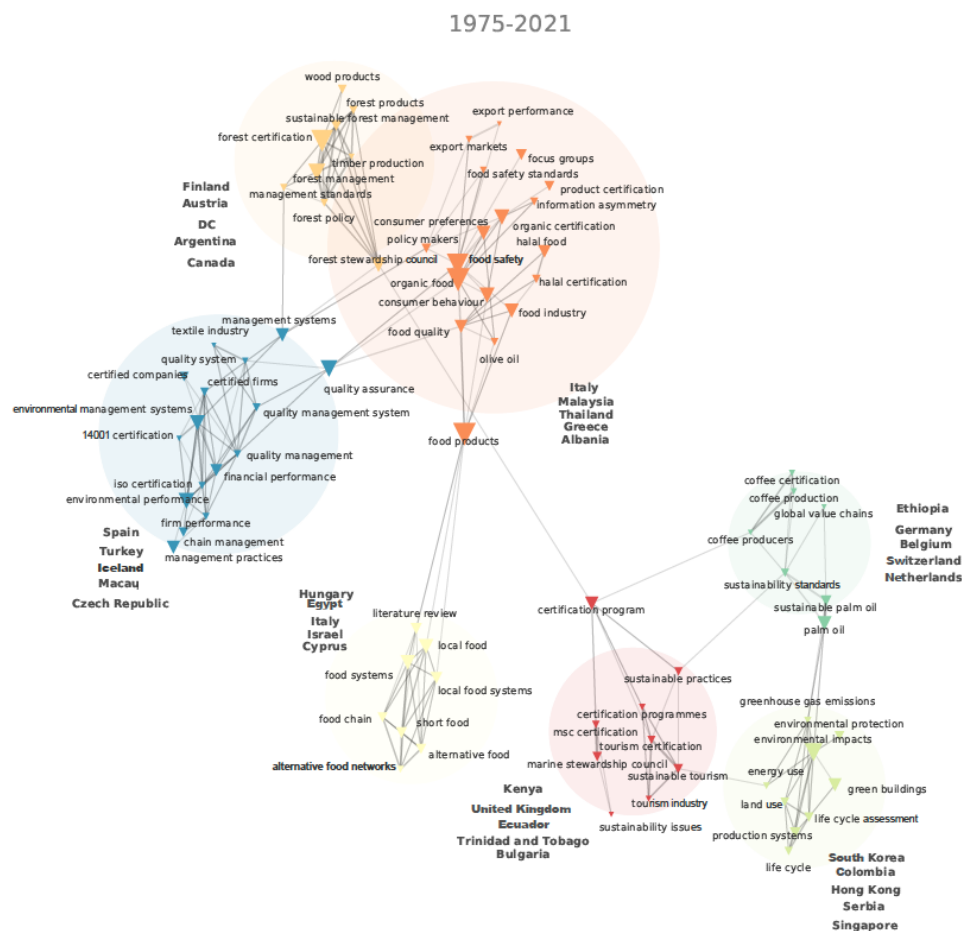
² EU citizens, agriculture and the CAP

<https://ec.europa.eu/commfrontoffice/publicopinion/index.cfm/Survey/getSurveyDetail/instruments/SPECIAL/surveyKy/2229>

Making our food fit for the future – Citizens' expectations

<https://ec.europa.eu/commfrontoffice/publicopinion/index.cfm/survey/getsurveydetail/instruments/special/surveyky/2241>

Figure 3: Key topics of research 1975-2021



NB: This map presents a lexicometric analysis of the relationships among the key terms that characterise the literature collected in the Scopus database of 2397 articles. The size of the triangles indicates the frequency of the use of the term and the concentration of terms in clusters demonstrate that there are a number of subgroups of literature within the large database and that they are not all using the same terminology. The physical proximity of the clusters (particularly overlapping circles) signifies that the articles have other elements in common, such as the journal, the affiliation or the author. The top 5 countries that are publishing on these topics are identified for each cluster.

These two elements – consumer purchasing behaviour and the ways in which intermediary actors influence the use of labels and quality assurance are particularly important when we think about the emergence of alternative agri-food networks (AFNs), which saw a rebirth in the United States in the 1990s (Ostrom, 2008) and in the 2000s in Southern Europe (Dubuisson-Quellier and Lamine, 2004). More generally, AFNs focus on the relationship between producers and consumers on the basis of direct or mediated interaction between the two subjects (Marsden et al., 2000). It is important to understand what is meant by the term short chain. First, the term short can be understood as reducing the number of product passages between the producers and consumers; in this sense, geographically distant chains can also be considered as short. Secondly, the term short can be understood as the physical distance between the two subjects, and hence the closeness or distance between production and consumption, irrespective of the number of intermediaries. Finally, a third sense may relate to the temporal dimension; that is, when the time between production and consumption decreases – which leads towards greater attention and consumption of fresh products. These assumptions are not necessarily exclusive and may exist in parallel within even the same initiatives. The importance of this topic for Hungary and Southern Europe in

particular is demonstrated by the yellow cluster in **Figure 3**. The linkage between AFNs and the quality management literature (blue cluster) is found through food products and particularly through food safety, food quality and organic standards (red cluster). However, there seems to be separate bodies of literature between those studies that focus on environmental and sustainability certification, particularly in global value chains, and those who are focused on assessing and assuring quality in local food systems.

An element of AFNs that has been studied intensively is how quality is created and defined in the relationships between production and consumption. In fact, it is a *socially constructed quality* (Watts et al., 2005), in which the concepts of trust and the embeddedness of the chains in particular places is fundamental (Goodman, 2003). The *socially constructed quality* of AFNs is, in some respects, analogous to *institutionally defined quality* (Salis, 2013), which is linked to state agencies, the agri-food industry and based on the certification of products against quality standards (Arfini et al., 2016; Cavazzani et al., 2006; Loconto and Busch, 2010). However, according to Goodman (2003), despite the fact that brands and certifications relate quality to places, they do not succeed as AFNs because interpersonal trust remains fundamental to movement adherence, which we have witnessed with the rapid explosion and retraction of box-schemes during the COVID-19 pandemic in France in 2020 (Chiffolleau and Dourian, 2020).

From this point of view, AFNs typically develop certifications that are *alternative* to *institutional* ones: this is a bottom-up certification process that involves the producers and the creation of mutual trust. For example, *Participatory Guarantee Systems* operate locally and require the active participation of producers and consumers in quality assurance systems (Loconto and Hatanaka, 2018). These systems are generally initiated by small producers in collaboration with collectives of consumers precisely because it is possible to establish symmetrical and solidarity-based relationships based on knowledge and trust (Hebinck et al., 2014). Carrera (2009) claims that AFNs use a *difference bet* because the people involved are willing to accept different types of additional costs (higher prices, time dedicated to the organization) to ensure individual and social well-being as a greater good. The complex relationship between consumers and producers open up space for the creation of bottom-up social innovation (Chiffolleau and Loconto, 2018; Kropp et al., 2020). It is in these innovative initiatives that the future of European food systems is moving and thus form the basis of this study.

This review of the literature shows that there remain a number of gaps in the literature about how are SFSC are organized in their diversity, what food qualities are traded in SFSC and what is being assured – is it the product, the person or the process that provides the trust found among producers and consumers? The role of intermediaries is clear in the literature, but we need more information about how they are working and what types of challenges they face and overcome. By examining the diversity of initiatives across Europe, we can draw lessons for the Hungarian context.

Conceptual framework for studying quality assurance in SFSCs

Based on previous research (Loconto et al., 2018a; Loconto et al., 2018b), we have developed a theory-driven set of parameters that enable us to compare a large number of initiatives. We separate the conceptual elements into four domains that help us to identify actors, devices and processes that are important for ensuring quality in short food supply chains. We thus theoretically-derived the questionnaire used to collect data, we develop our typology based on these four domains and we organised the analysis of our results along these parameters. These four domains were also used to develop the enabling institutional environment for SFSC quality assurance.

Business domain: the roles of different actors

The business domain refers to the trading relationships considered to be in the middle of a supply chain (de Bakker et al., 2019; Reed, 2009; Smith, 2010). The value chain includes all actors and processes that add value from farm to fork (FAO, 2014a). Each role in the value chain – production, collection, aggregation, processing, transportation, retail, food preparation – can be carried out by different types of actors be they public, private or civic. Therefore, we refer to the roles of actors in getting food from the farm to the table. Based on prior research have identified five types of actors in quality assurance aspects of SFSCs: producer, consumer, intermediary, regulator and certifier. We include information about the legal entity of the initiatives, the type of consumers, and their declared core business.

Certification domain: the type of control system

The certification domain is where standards development organisations, certifiers, accreditors and experts interact. It is well studied in terms of the credibility of standards systems and the types of bureaucracies that they put into place to ensure that there are markets for certified products (Loconto, 2017b; Fouilleux and Loconto, 2017; Reinecke, 2010; Reinecke et al., 2012; Cochoy, 2010). Numerous studies have argued that the way in which products, people or processes are audited has differential outcomes for the producers, intermediaries and consumers of the products (Bingen and Busch, 2006; Loconto and Hatanaka, 2018; Loconto, 2017a; Power, 2003). For the purposes of this study, we have sought to describe the control system, identify formal and informal labels, the range of certifications used, laboratory tests, consumer feedback loops and who participates in the certification process.

Public domain: the nature of intermediation

The public domain refers to the diversity of services that are offered by intermediaries or public actors who enable farmers to engage in agroecological or sustainable farming practices and level of engagement in the exchange processes (Loconto et al., 2018b). Recent studies argue that the consumers are increasingly looking for a role for government regulation with regards to sustainable food (Brenton, 2018; Janssen and Hamm, 2014). Previous research identified four types of intermediation activities that could be carried out by public, private or civic actors (Loconto et al., 2018b). These were:

- *Information-rich*, which are characterized by a key intermediary whose role is mainly to share information among market actors, but not actively to organize the market. Direct sales where the intermediary is not necessarily involved is the dominant form.
- *Diversified*, where a multifunctional intermediary provides services that add value to market exchanges and among the market actors but does not run the consumer market.

Classic market intermediaries are thus diversifying to offer a range of services such as production and extension, product development, research and consumer recruitment.

- *Interactive* have key intermediaries whose main role is to set up a physical market space where products can be exchanged. Although the intermediary may provide additional services, it is the convening of the market exchange that defines the initiative.
- *Sociocultural*, where multifunctional intermediaries not only provide a range of services (environmental, sociocultural and economic) to both producers and consumers, but are also highly involved in hosting markets. On-farm and specialized shops are most active.

For the purposes of this project, we gathered information about the Agronomic trajectory, Network/actors involved, the length of supply chain, the number of intermediaries, and if they were using digital technologies.

Consumption domain: Articulation of values and product quality

The consumption domain is where consumers, retailers and food catering actors interact. In SFSC, producers are also usually part of these interactions. This area is attracting growing attention as ethical consumption practices are continuing to grow in EU countries (Andorfer and Liebe, 2012; Schenk et al., 2016; Carrington et al., 2020). According to the economics of conventions, market exchange is only possible when there is some agreement (a “convention”) about the “quality” of the products to be traded and methods that enable actors to measure that quality (Boltanski and Thévenot, 2006 [1991]). According to Callon et al. (2002), more than a simple comparison of product characteristics, the process of defining a product is the process of defining its qualities. The concept of quality therefore is the result of a process of qualification; whereby qualities are attributed, stabilized objectified and arranged to a product and these qualities have two principal components: intrinsic and extrinsic. In our cases, actors identified differences between intrinsic qualities (like being agroecological or organic) and extrinsic qualities (like being tasty or the right size). We relied upon the actor’s own definitions to gather information about the qualities of their products, the use of celebrity spokespersons, the specific quality management practices, their visions for the future and prospects for growth and their perception of the economic sustainability of their initiative.

Enabling institutional environments for SFSC quality assurance

Based on the above conceptual framework, we have operationalised these four domains in an index that we have used to classify the national contexts within which the SFSCs are operating. This institutional context is particularly important as it forms the social structures and incentives for the emergence of SFSC innovations.

In this theory-driven index, we have selected from well recognized and methodologically rigorous indices that provide us with information and scores across these four domains (**Table 1**, Appendix E). The relevance of the indicators for each domain is as follows:

Certification Domain: Includes variables that indicate the robustness of the knowledge infrastructure put into place to support the use of standards, laboratory testing, certification and accreditation. The assumption here is that those countries that have invested a lot in third-party and product certification infrastructure will make the use of these forms of certification easier, while this highly structured support may also open opportunities for the emergence of informal labels that are used in SFSCs.

Public Domain: Includes variables that indicate policy environment and public institutions that can support agroecology and local food systems. Here the assumption is that public actors are very important for ensuring that there are conducive public policies, but also that research and innovation are also supported by civic actors. For example, we use the indicator for the number of EU Operational Groups as an indicator of the innovation potential rather than the research projects that have been funded because the operational groups are multi-stakeholder and are usually led by farmer organizations and NGOs.

Business Domain: Includes variables that indicate the industrial ecology within which the innovations are operating. The assumption here is that the more surrounding businesses are acting responsibly, the more responsible businesses will thrive. This is based on the idea that while there is competition among business, the ecological synergies ensure that businesses learn (or at least imitate) each other's good practices.

Consumption Domain: Includes variables that indicate if there is a strong consumer demand for quality, sustainable food in the country. We rely wholly upon the most recent Eurobarometer surveys as there were specific questions in these two surveys dedicated to consumer awareness, willingness to pay and importance of SFSCs in purchasing decisions.

Table 1: Multiple criteria for assessing SFSC Institutional Environments

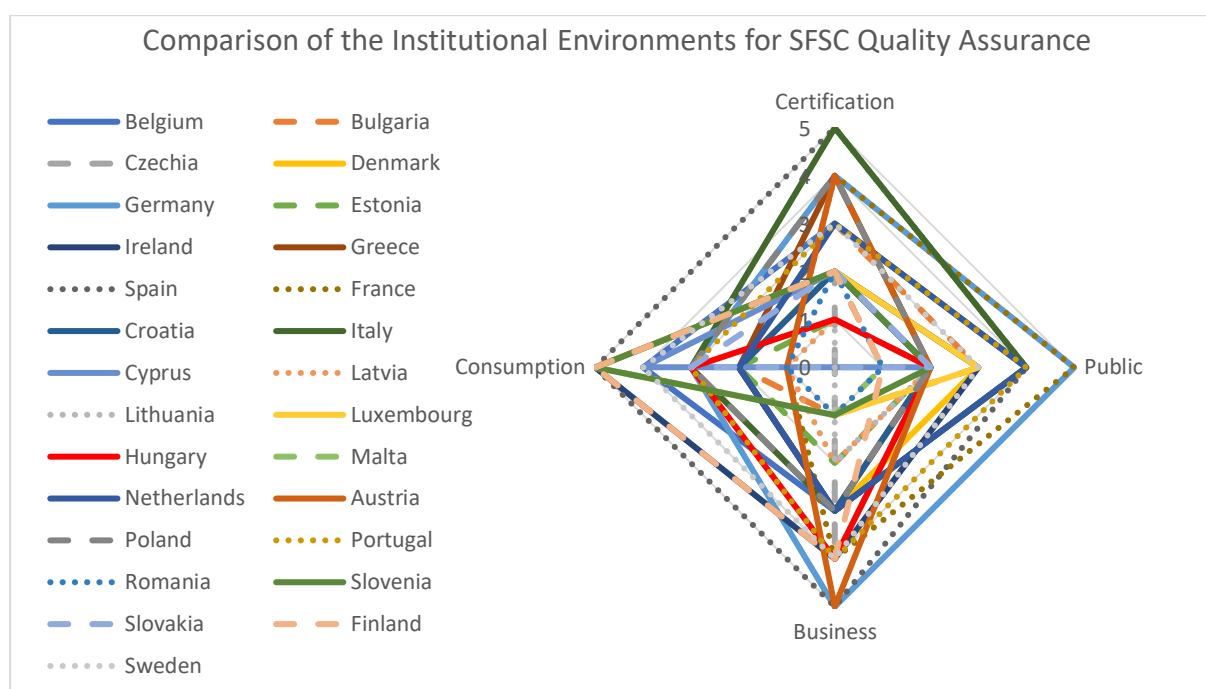
	Variable Name	Description	What is measured	How it is scored
	Country	Official Name of the Country	Name	
	CoID	The official Country code	ID	
CERTIFICATION DOMAIN	SDO/NAB	The year that a separate National Accreditation Body was created. EU law required it in Regulation (EC) No 765/2008.	Year	0 = after 2008 ; 1= before 2008
	#OrgancCertifiers	The number of certification bodies in the EC accredited CB list as of 01 January 2021.	Number	0 = below EU average; 1 = above EU average
	#OrgCertOperators	The number of certified operators in the country. Most recently reported data (2017-2019). Source: EC	Number	0 = below EU average; 1 = above EU average
	#FTCertOperators	The number of certified operators in the country as of 1 January 2021. Source: FLOCERT	Number	0 = below EU average; 1 = above EU average
	1Logo%Agree	The percentage of respondents who agreed that it was better to have just 1 label on packages that assured sustainability. Source: Eurobarometer 2020.	%	0 = below EU average; 1 = above EU average

PUBLIC DOMAIN	AgroecologyPolicy	Whether or not the country has a specific agroecology policy. These policies range from organic, ecological farming, waste reduction, biodiversity, rural development, etc. Their presence in the FAO Agroecology Lex with the keyword "agroecology" is what constitutes a yes value. Source: FAO Agroecology Lex	Yes/No	0 = no ; 1 = yes
	FamilyFarming	Whether or not the country has a specific policy to support small farmers or family farmers. These policies are typically related to land ownership, biodiversity and youth incentives. Their presence in the FAO FamilyFarmingLex with the keyword "family farming" is what constitutes a yes value. Source: FAO FamilyFarming Lex	Yes/No	0 = no ; 1 = yes
	%CitizensFavorCAPpayments	The percentage of respondents who were in favor of continuing EU subsidies to farmers. Source: Eurobarometer 2020.	%	0 = below EU average; 1 = above EU average
	#EIPAgriOG	The number of operational groups per country. Operational Groups are intended to bring together multiple actors such as farmers, researchers, advisers, businesses, environmental groups, consumer interest groups or other NGOs to advance innovation in the agricultural and forestry sectors. Source: EIP Agri database.	Number	0 = below EU average; 1 = above EU average
	#AgroecologyR&T	The number of agroecology specific research and training facilities in the country. Source: (Nicot et al., 2018)	Number	0 = below EU average; 1 = above EU average
BUSINESS DOMAIN	SSE Reg	RIPESS EU – Solidarity Economy Europe is a Network of networks and initiatives for the promotion of Solidarity Economy in Europe. It includes 40 sectorial, national and inter-sectorial networks in 16 countries. RIPESS brings thousands of concrete experiences that identify as solidarity economy together in Europe: self-managed productive cooperatives, solidarity markets, responsible consumption and food sovereignty, time banks, proximity services, environmental and ecological initiatives, financial alternatives (local currencies, ethical finance), structures for the promotion gender equity, innovative educational experiences, fair trade enterprises, local development associations and more. Y/N = Member Country of RIPESS EU. Source: RIPESS EU	Yes/No	0 = no ; 1 = yes

CONSUMPTION DOMAIN	SmBussSupport	Whether or not the country has a specific policy to support SMEs. Number of good practices per country included in the SBA database. This database contains activities by public authorities and public-private partnerships in EU Member States, recognised as good practices to improve the business environment of small and medium-sized enterprises (SMEs).	Number	0 = below EU average; 1 = above EU average
	#SFVC	The number of short food value chains included in the Agrikulti-UGE database. Source: own data.	Number	0 = below EU average; 1 = above EU average
	WBEaseDB	Ease of Doing Business Score. Source: World Bank.	Score	0 = below EU average; 1 = above EU average
	SustFoodIndex	Sustainable Food System Index 2018 Overall Score. Source: Economist Intelligence Unit	Score	0 = below EU average; 1 = above EU average
	%QualityLabel	The percentage of respondents who say a specific quality label is an important factor in their food choice. Source: Eurobarometer 2020.	%	0 = below EU average; 1 = above EU average
	%MemSFVC	The percentage of respondents who say being part of a short supply chain is an important factor in their food choice. Source: Eurobarometer 2020.	%	0 = below EU average; 1 = above EU average
	%GeoOrigin	The percentage of respondents who say that the geographic origin of their food is important in their food choice. Source: Eurobarometer 2020.	%	0 = below EU average; 1 = above EU average
	%EatSustDiet	The percentage of respondents who reported that they currently eat a healthy and sustainable diet. Source: Eurobarometer 2020.	%	0 = below EU average; 1 = above EU average
	%WTP	The percentage of respondents who were willing to pay more for sustainable products. Source: Eurobarometer 2020.	%	0 = below EU average; 1 = above EU average

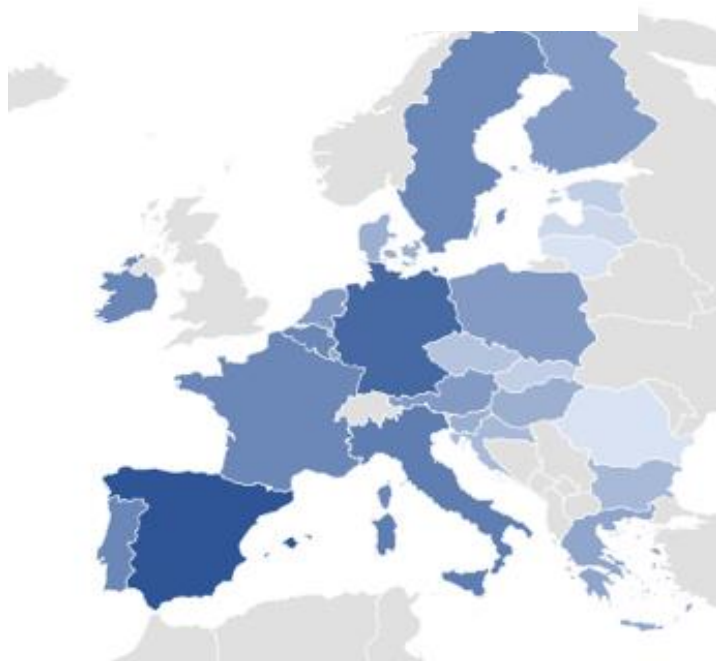
After having collected data for all 27 countries according to the above parameters, we have arrived at the following evaluations for the EU 27 (Figures 4 and 5). As **Figure 4** shows, there is no country that has reached a perfect score, and indeed most are rather inconsistent across the four domains. This result should be noted because if we consider food systems institutions to cover more than just agricultural policy, the differences in national institutional ecosystems can be quite divergent and affects the emergence of SFSCs.

Figure 4: Radar graph of the multi-criteria scores for the EU27 (2020)



Based on this analysis, we find that Spain maintains the most conducive institutional environment for the emergence of SFSC quality assurance schemes, while Romania is the least conducive. Spain scored consistently above the European average across all domains and obtained the maximum of points for the certification, business and consumption domains.

Figure 5: Multi-criteria IE score for EU 27



NB: The darkest blue is the highest score (19) and the lightest blue is the lowest score (5). Grey countries are not included.

Hungary is ranked in the middle of the spectrum, sharing 7th place with Denmark and Slovenia. The business domain score was 4/5 and the consumption domain score was 3/5. Certification and public domains were much lower and are most likely linked with the below average number of certified operators and certification bodies in the country. However, the most important element is that Hungary has 0 EIP-AGRI operational groups listed in the EU database. This could be a reporting error based on national differences as Denmark also reports 0, but it might also be due to different national approaches to implementing the EIP initiatives. This is something that should be explored further.

Results

Descriptive statistics from the database

This section quickly describes the type of initiatives for which we have collected information. A total of **695 profiles** were compiled in our database from all the EU member countries, excluding Hungary (Appendix C), using the header parameters shown in **Table 2**. All of them were contacted to participate. Invitations were sent mainly via email, although a few were by Facebook or at their official websites via filling contact forms. After 3 follow up contacts aimed at increasing our response rate, and as illustrated in **Table 2**, only **27 responded and completed the survey from 11 countries** (Austria, Belgium, Croatia, France, Germany, Greece, Italy, Luxembourg, Netherlands, Spain and Sweden) (Appendix D).

Table 1: Total number of data entries.

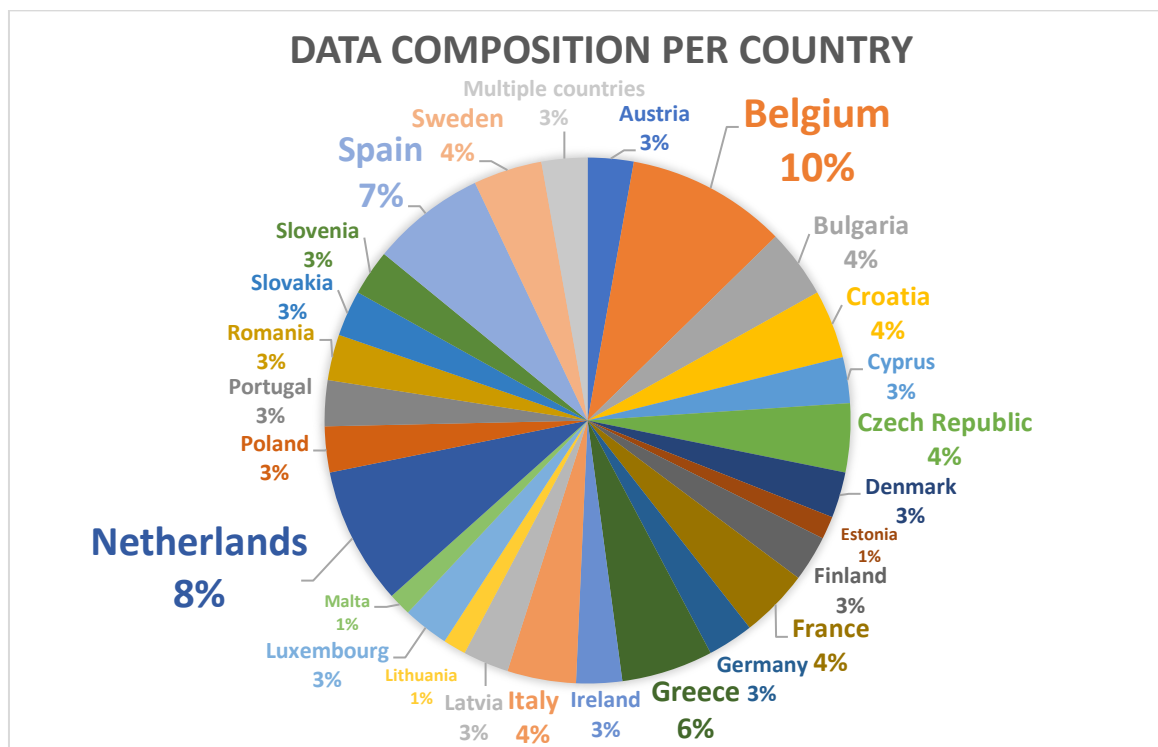
Country	Compiled in database	Survey responses	Website extractions	Processed into data
Austria	35	1	1	2
Belgium	64	5	2	7
Bulgaria	3	-	3	3
Croatia	29	1	2	3
Cyprus	9	-	2	2
Czech Republic	15	-	3	3
Denmark	27	-	2	2
Estonia	4	-	1	1
Finland	23	-	2	2
France	54	3	-	3
Germany	37	1	1	2
Greece	45	1	3	4
Ireland	62	-	2	2
Italy	46	2	1	3
Latvia	4	-	2	2
Lithuania	2	-	1	1
Luxembourg	23	1	1	2
Malta	1	-	1	1
Netherlands	45	5	1	6
Poland	7	-	2	2
Portugal	40	-	2	2
Romania	5	-	2	2
Slovakia	21	-	2	2
Slovenia	5	-	2	2
Spain	57	4	1	5
Sweden	30	1	2	3
Multiple countries	2	2	-	2
Total number of entries	695	27	44	71

Given the low response rate, data was complemented by using an alternative method for data entry consisting of web-scraped information extractions from initiative websites (Appendix A). Via that method, a total of 44 profiles were transcribed into data, assuring all the EU countries are in (at least 1-2 per country). These along with the amount of survey responses sum a total of 71 data entries (see Table A2 on Appendix A), all with the essential parameters filled and to be used for further data analysis with lexicometric software.

Table A3 (Appendix A) shows a structured data set of the completed profiles, indicating per country the amount of every 1) supply chain role (producer, intermediary, producer & intermediary, certifier, and regulator), 2) legal entity (limited liability company, non-limited liability company, cooperative, NGO, ad hoc committee, no legal entity, other or unknown)

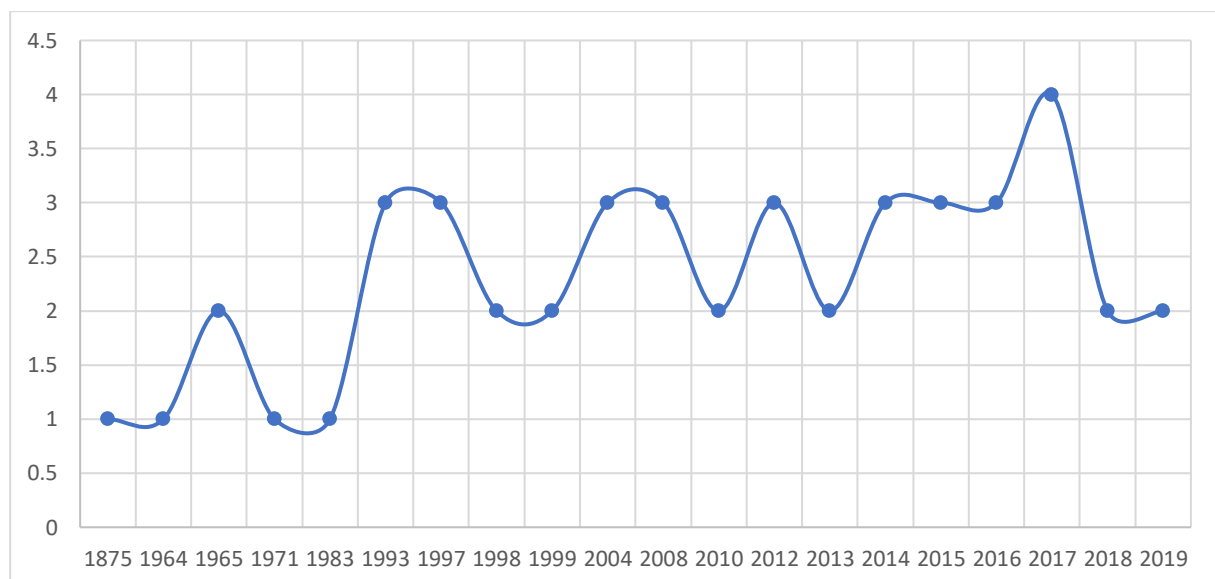
and 3) control system (TPC, PGS, social control, consumer regulated, business-to-business, other, or no information found on website).

Figure 1: Percentage of data entry per country.



The country with the highest number of initiatives (**Figure 6**) found through our research is Belgium representing 10% of the total data entered, with 7 entries. The second highest is Netherlands with 8%. Spain follows with 7% (6 entries), Greece with 6% (4 entries), and Bulgaria, then Croatia, Czech Republic, France, Italy and Sweden with 4% (3 entries). With regards to 'multiple countries', the 2 entries (3%) are France-based with presence in 1-2 countries: Belgium, Portugal or Spain. **Figure 7** traces the dates of creation, with three key upticks in new initiatives: 1993, 2004, and 2017.

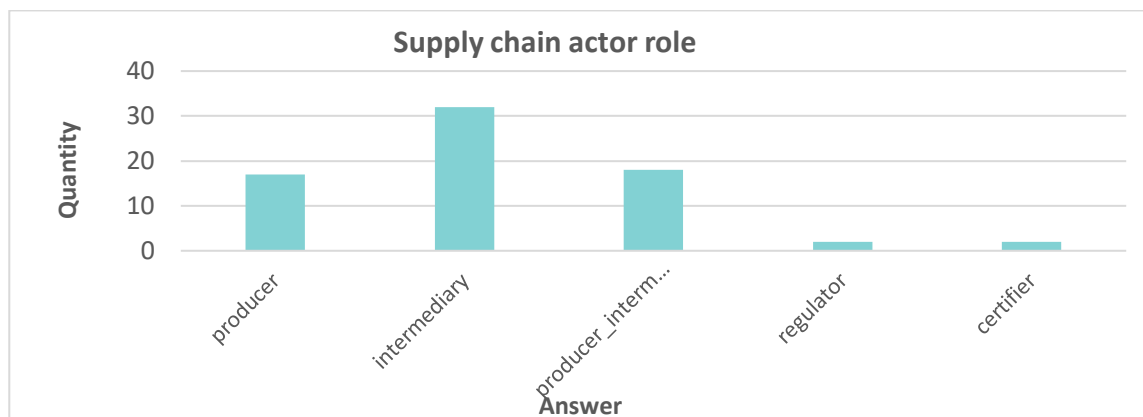
Figure 2: Date of creation (n=46)



Business domain: the roles of different actors

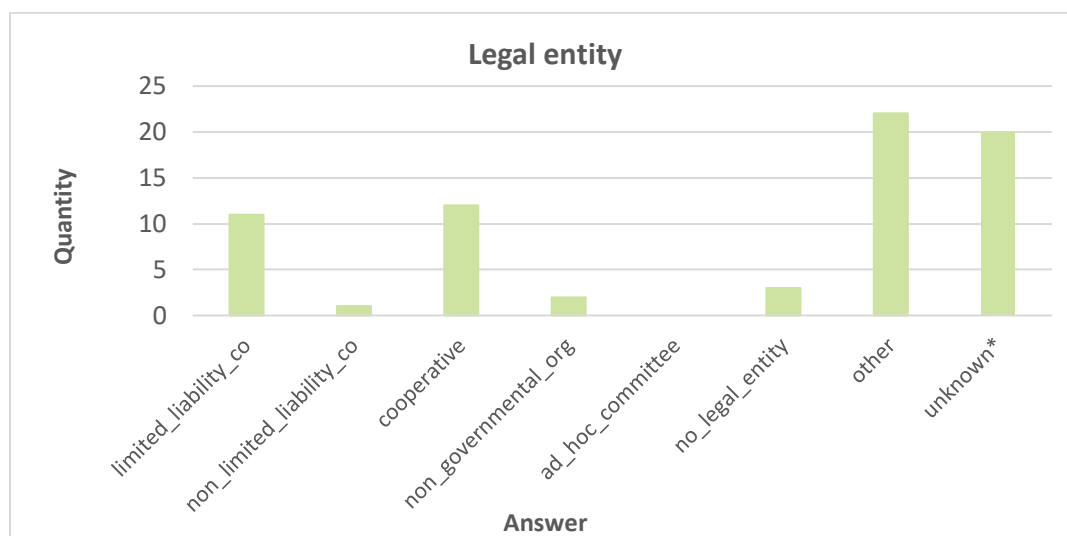
In this section we identify the supply chain roles of the SFSC organisers and the legal forms under which they are registered.

Figure 3: Entry quantity per role of supply chain actor



As illustrated in **Figure 8**, the category with the highest number of entries from both survey respondents and website transcriptions is 'intermediary' with 32 (45% of the total), followed by 'producer-intermediary' and 'producer': the first represents 18 profiles (25%) whereas the other 17 (24%). For 'regulator' and 'certifier', the sum of these two is not greater than 4 (6%).

Figure 4: Entry quantity per legal entity



NB: *option not available on survey

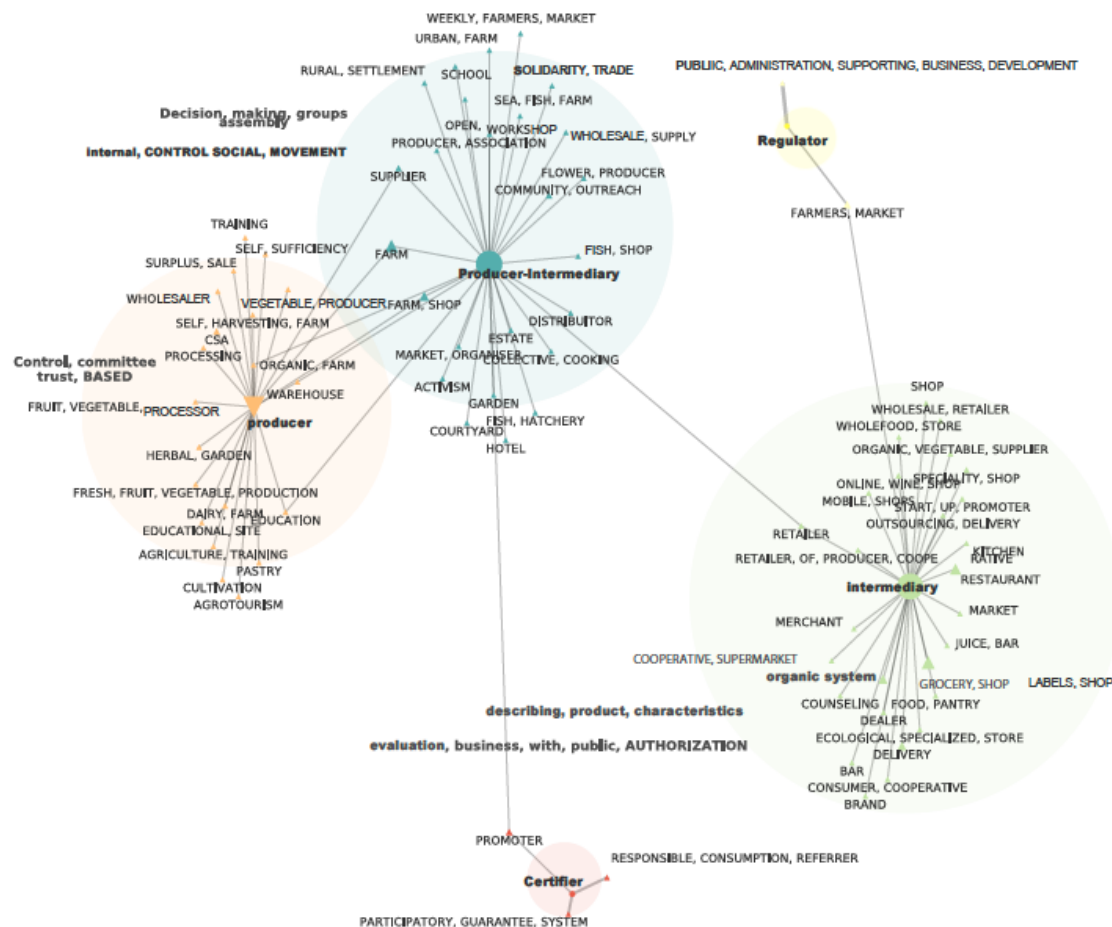
Of the total 71 data units, 22 (31% of the total) referred to 'other' legal entities than the ones displayed in the survey questionnaire (Figure 9). The rest that identified in any of the first 5 categories of common legal entities were expressed as follows: cooperatives (n=12, 17%), limited liability companies (n=11, 15%), non-governmental organizations (n=2, 3%), non-limited liability company (n=1) and no *ad hoc* committees. In addition, over a quarter did not include this information on their website (n=20, 28%) and 3 (4%) survey answers explained that they were not a 'legal entity'. This suggests that there could be upwards of 20% of these initiatives that do not have a legal entity or are perhaps working as loose associations of self-employed. This conclusion is suggested by **Table 3**.

Table 2: List of 'other' legal entities

'Other' legal entity	Supply chain role
association	intermediary
association	producer
association	producer-intermediary
association	producer-intermediary
association without lucrative purpose	producer
de facto association	regulator
family farm	producer-intermediary
foundation	intermediary
general partnership	producer
independent entrepreneur with no employees	producer
independent farmer	producer-intermediary
join-stock company	intermediary
join-stock company	intermediary
limited liability cooperative	producer-intermediary
one-person business	intermediary
private company	producer
proprietorship	producer
proprietorship	producer
public institution	regulator
public limited company	producer-intermediary
self-employed / family business	intermediary
self-employed / individual entrepreneur	producer

In order to get a better understanding of what role the intermediaries, producers and producer-intermediaries are playing in the SFSCs, we analysed the services that were provided (see Figure 11).

Figure 5: The relationships between actor roles and specific activities



Source: CorTexT analysis by the authors

NB: The core actor roles we have identified are in the centre of each cluster and their specific duties are the small triangles. The clusters are tagged with the specified "other activities" carried out by the actors.

The Intermediary cluster (green) is the largest grouping and the activities that the intermediaries provide are focused on retail (supermarkets, wholesale, specialty shops, etc.). Three are also food service providers (restaurants, kitchens, juice bars) and finally online shops, brands and other marketing activities. Describing product characteristics and evaluation businesses with public authorizations are other activities that describe well what these actors do.

Producer-Intermediaries (turquoise cluster) are those who are closer to the production side of the supply chain, but who are also carrying out services in direct markets, solidarity trade and supply, distribution, retail and collective cooking. The community engagement, workshops, and activism terms that are in this group explain the other activities of decision-making groups, assemblies, internal control and social movements.

Producers (orange cluster) are clearly focused on production, but they too are offering services in terms of education, agrotourism, training, pastries, warehouses and the notion of self-sufficiency also emerges. Trust-based control committees does explain well this group.

Certifiers (red) and regulators (yellow) are quite rare in our database (2 each) but are nonetheless emblematic of the initiatives. The regulators are public authorities who operate farmers' markets in Ghent, Belgium and Split, Croatia. The certifiers are both French

If we compare across the different activities of who is supplying (**Figure 12**), who is selling (**Figure 14**) and who is producing (**Figure 11**), we begin to understand the hybridisation of this producer-intermediary role. Farmers are involved in all activities, as are cooperatives who remain fundamental to the aggregation and distribution of products. Companies (and thus legal entities) are more predominant in the supply and sales of SFSCs, while we also see some businesses also engaged in production. An interesting development is the identification of retailers being present across all three activities and volunteers being quite present in the production of food. This poses questions about the long-term prospects of some of these initiatives if they are relying upon volunteer labour in one of the most labour-intensive activities of the food system. Further exploration of what is considered labour and volunteerism in the production side of SFSCs should be considered.

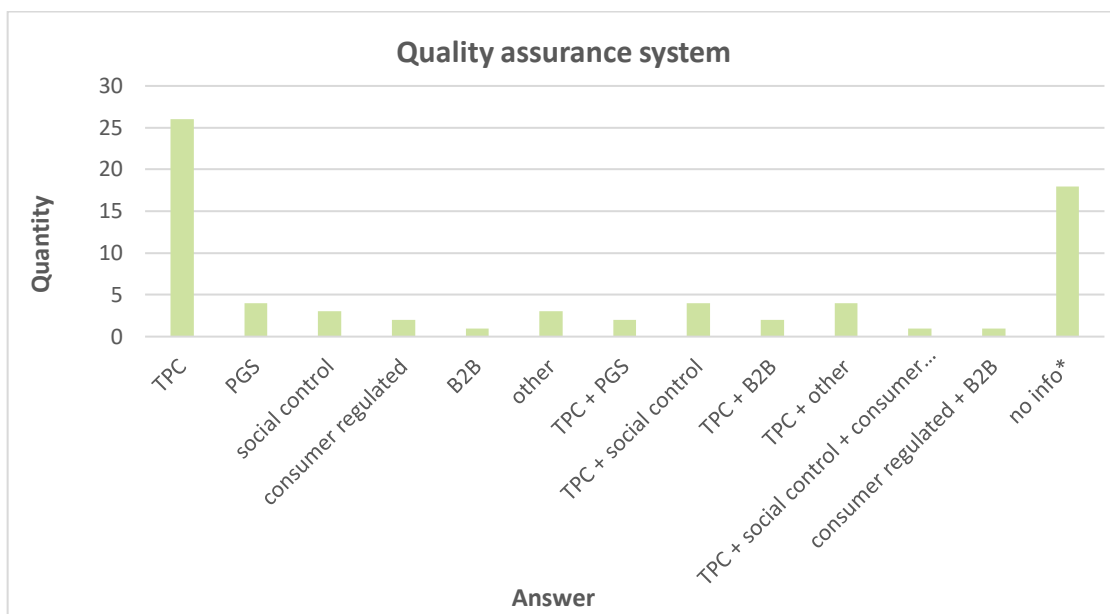


Source: NVivo analysis by the authors

Certification domain: the type of control system

This section explains the trends found in the types of control systems, the formal and informal labels used, and the range of certifications, laboratory tests, and traceability elements. We also have collected data on who participates in the certification process.

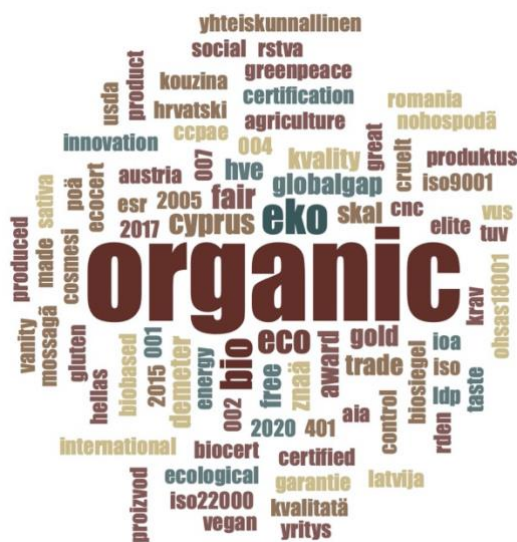
Figure 9: Entry quantity per control system on the quality assurance



NB: *option not available on survey

In the question ‘which quality assurance system applies to the quality control/supervision of your products and services?’, one could choose one or more of the following 6 options: third party certification (TPC), participatory guarantee system (PGS), social control, consumer regulated, business-to-business (B2B), and other if there is another way by which a business, initiative or organization is ruled upon. As illustrated in Figure 5, responses varied from single to mixed systems: TPC alone with 26 (37% of the total) as the most chosen, followed by ‘no info’ with 18 (25%), which refers to no relevant information found on official websites; PGS, mixed TPC-social control and mixed TPC-other, with 4 each (6%); and the rest ranges from 3 to 1. This confirms prior research (Loconto, 2017; Fougère and Loconto, 2017), that explained how third-party certification dominates that there are more and more hybrid forms of second and third party controls in innovative ways.

Figure 10: Names of labels used across EU27



Source: NVivo analysis by the authors

Indeed, this dominance of TPC is clear when we understand what labels are the most used (**Figure 16**). We do also see a large number of national or local labels linked to ecological

agriculture, geographic origin (cyprus), specific organisations like demeter or specific diets (vegan). When we compare the formal and informal label descriptions (**Figures 17 and 18**), we see some notable differences. First, organic is the most important feature of formal labels, while local is that for the informal labels. Second, while both formal and informal labels are certifying products, informal labels also are certifying producers. Third, we see the word control more prominently in the formal labels, while guarantee better characterises the informal labels. The notions of **responsibility and economy** are very important for the informal labels, while quality and specific aspects of farming and inputs are highlighted in the formal labels.

Figure 11: Formal label descriptions

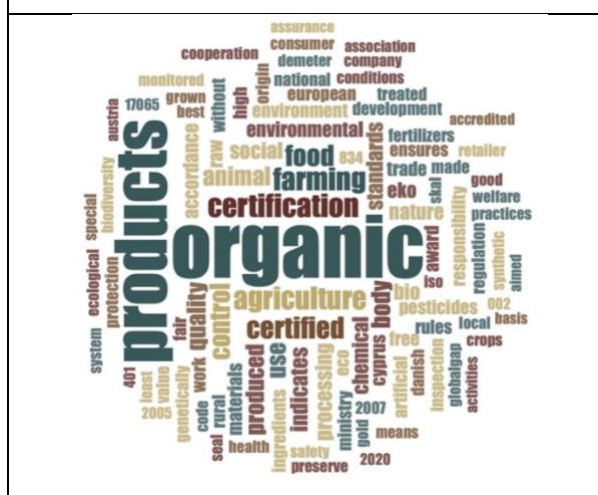


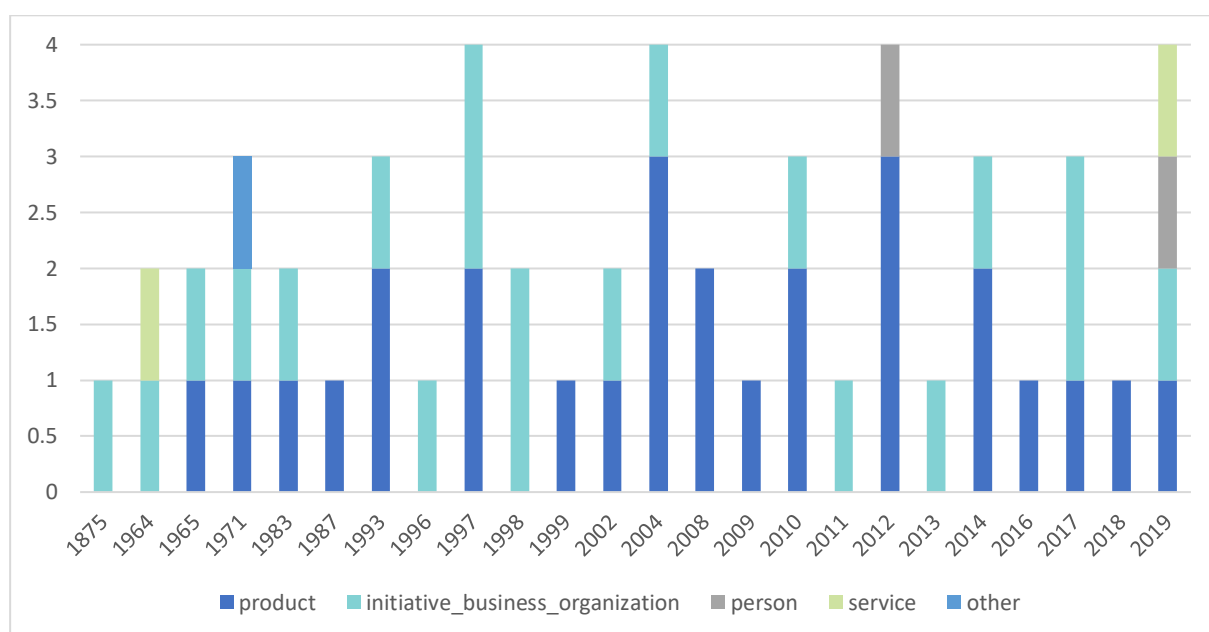
Figure 12: Informal label descriptions



Source: NVivo analysis by the authors

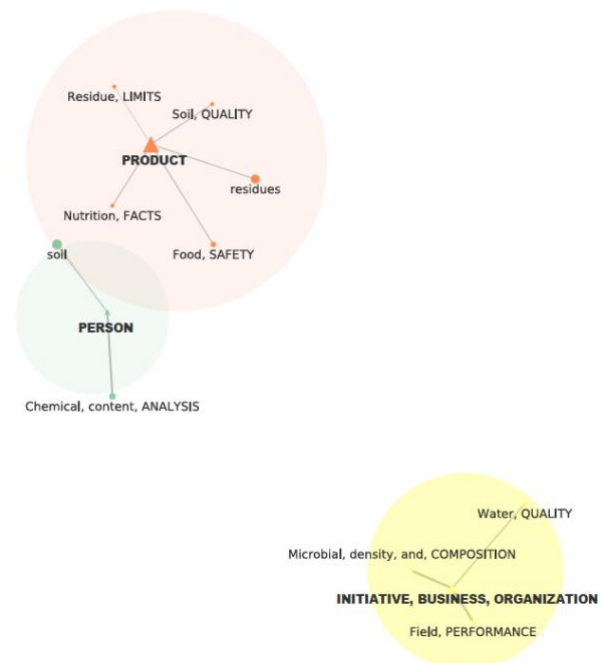
The question about what is certified is quite interesting as the TPC model of organic requires product certification, but the newer models seem to be looking to diversify where the trust is placed for certification. **Figure 19** traces this question by using the date that the initiative was founded to see what is certified.

Figure 13: What is certified (1875-2019)



Here the dominance of product certification is clear, but we also see the emerges of alternative models where services, businesses and people are certified. We see this also repeated in the nature of whether or not tests are completed according to what is being certified. Products (orange cluster) are logically the most frequently tested, mostly for food safety, soil quality, nutrition and agrochemical residues. Certified farmers (green cluster) are also testing their soils and the chemical content of products, while initiatives who are certified (yellow cluster) are testing a wider range of environmental indicators. Services are not tested.

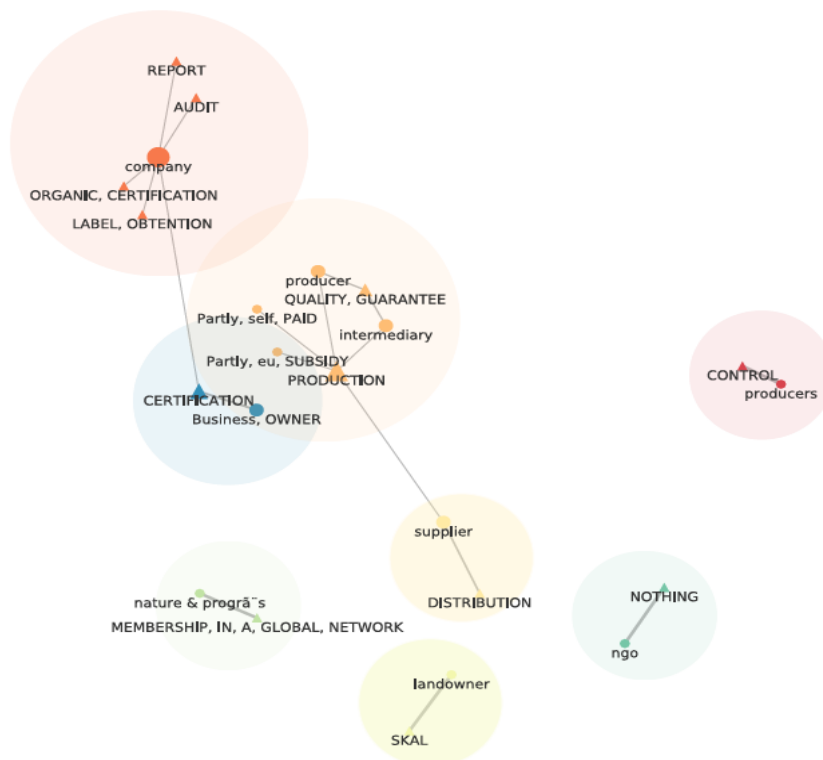
Figure 14: Lab tests completed according to certified entities



Source: CorText analysis by the authors

We complemented this information with data about who pays for the certifications and what services are paid for with this fee. As **Figure 20** illustrates, there are companies and producers are paying for the majority of the quality assurance fees. The small, isolated clusters are explained by responses that described systems where there no fee paid or there was a membership fee paid to a member-based organisation. Further exploration of the data confirms that certifiers are mostly auditing producers, intermediaries are rarely audited.

Figure 15: Services paid by specific types of actors



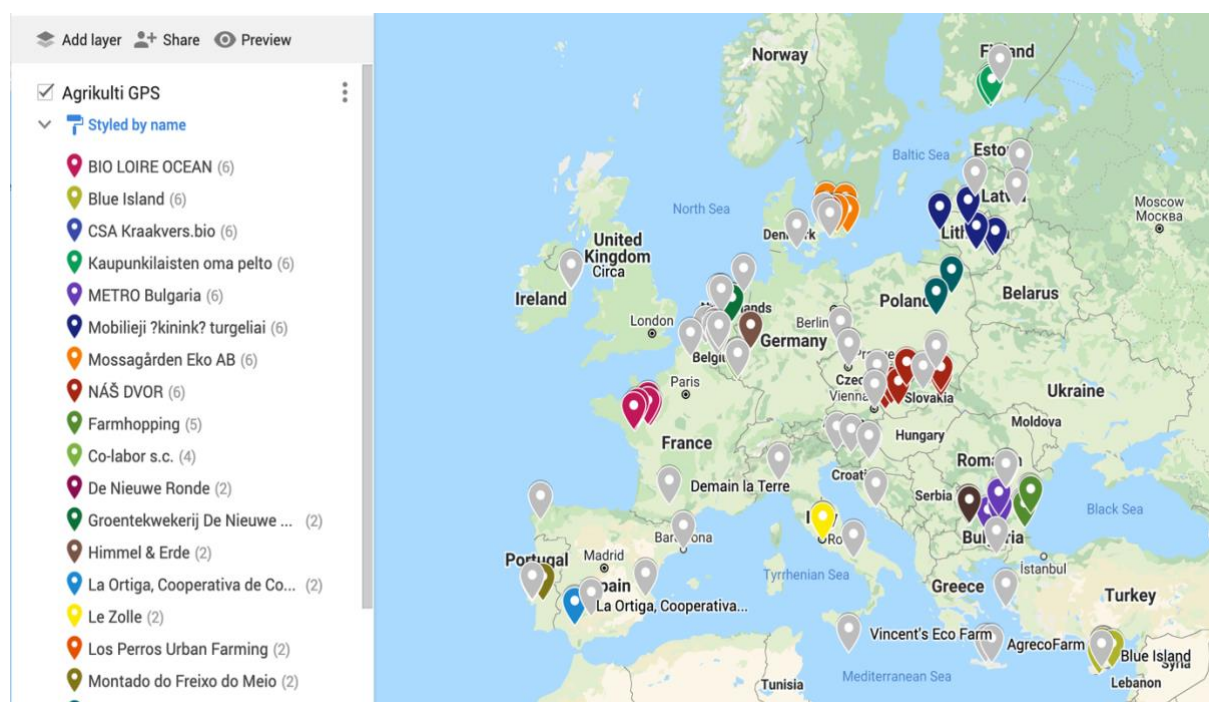
Source: CorText analysis by the authors

When we analysed the descriptions of traceability in the open-ended responses, we found that site visits dominated over the other means of traceability, this offers confirmation of the above conclusion, as site visits do not necessarily serve the purpose of traceability as it may be imagined in industrialised food systems. These site visits appear to serve the purpose of sharing information, tasting products, and checking documents and working together in workshops and other activities that can increase knowledge about the products, but are not necessarily designed to fulfil traceability requirements.

Public domain: the nature of intermediation

For the purposes of this project, we gathered information about the Agronomic trajectory, Network/actors involved, the length of supply chain, the number of intermediaries, and if they were using digital technologies. This offers us insights into how these initiatives are positioned within the broader organic or agroecological trends, prospections for growth and the digital transition.

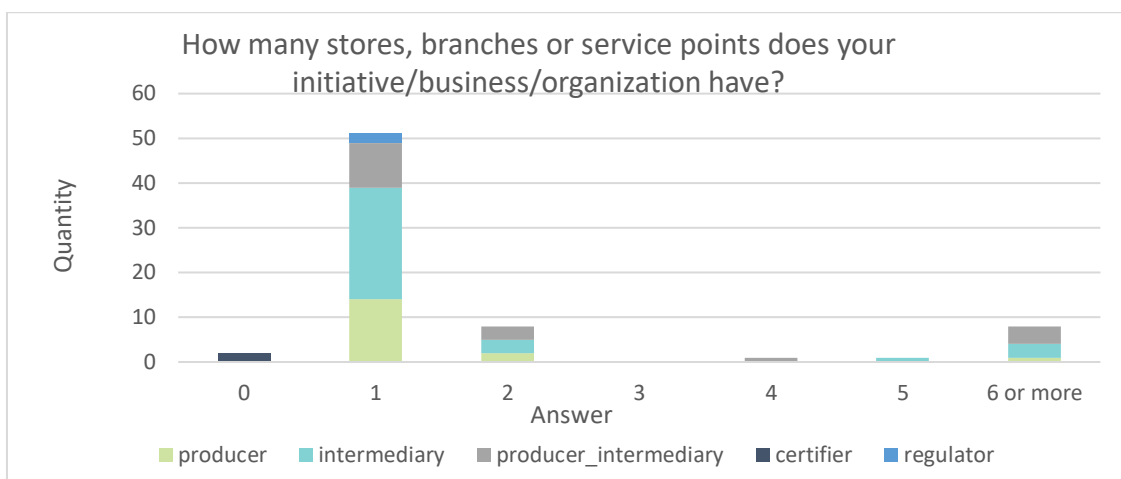
Figure 18: The geographic locations of the SFSCs (n=71)



As shown in **Figure 24**, there are initiatives across all of Europe. Those that we have identified are found mostly clustered around large cities, but not only. The majority of initiatives (n=51, 72%) have only 1 location (**Figure 25**). Another 8 (11%) have 2 location and another 8 (11%) with 6 or more. The legend found in Figure 23 highlights those with multiple locations. Metro Bulgaria is the only supermarket, while the others are mostly cooperatives or CSA networks.

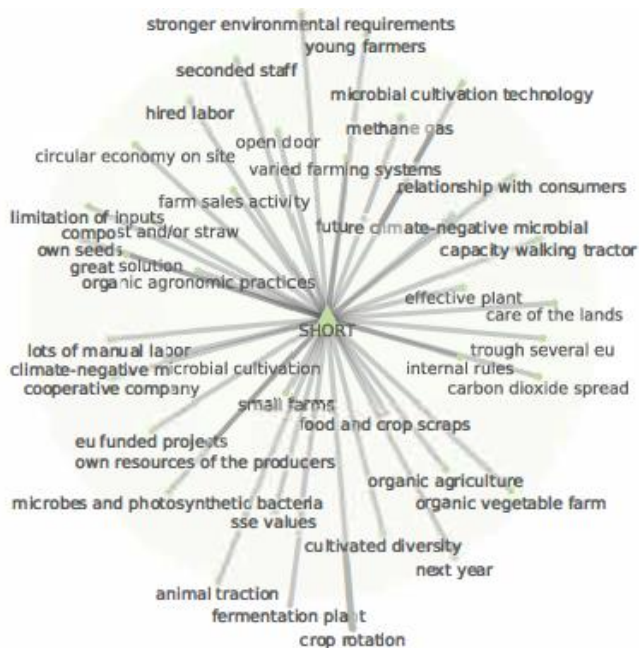
Of the 50 who declare only one location, 25 are intermediaries, 14 producers, 10 producer-intermediaries and 2 regulators. Those with two: are intermediaries (n=3), producer-intermediaries (n=3) and producers (n=2). The more widely spread-out initiatives (6 or more locations) count 4 producer-intermediaries, 3 intermediaries and 1 producer. The two certifiers in the database recorded not having any location, as they do not have any sales points are their activities are restricted specifically to certification activities.

Figure 19: Number of locations by actor role



In terms of the length of supply chains, the overwhelming majority who responded to this question claim to be working in a short chain (n=31, 91%) there were 3 medium chain responses. This illustrates that these initiatives are indeed locally anchored and driven by small initiatives who can gain in geographic distribution by connecting within networks in scaling out initiatives.

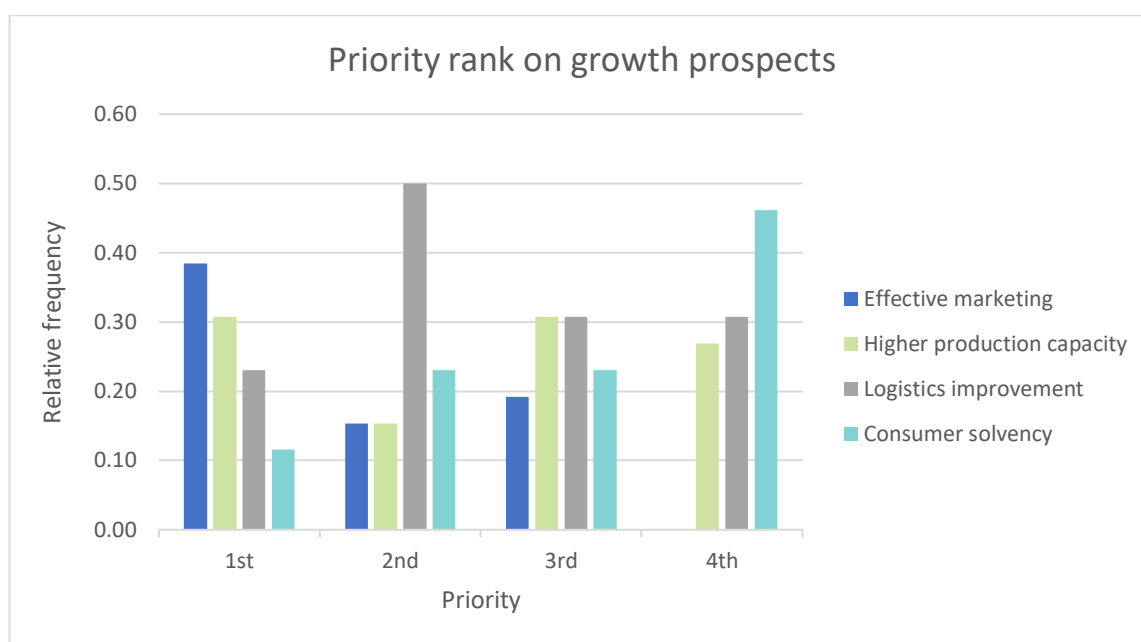
Figure 20: Agronomic practices of short chains



These short supply chains are characterised by a range of agronomic practices associated with organic agriculture, on site circular economies, farmer-saved seeds, crop rotation and strong environmental requirements (**Figure 26**). With regards to labour, this is again present in terms of the need for “lots of manual labor”, seconded staff, hired labour and young farmers. This suggests, in line with previous studies (Loconto et al., 2017), that youth are involved in interactive innovation processes (funded through EU projects) whereby research and extension staff are collaborating closely on farms with new and emerging technologies.

Further research could seek to identify those initiatives that are not project-financed from those that have emerged organically from civil society. This differentiation is important for being able to understand the capacity of these initiatives to change scale.

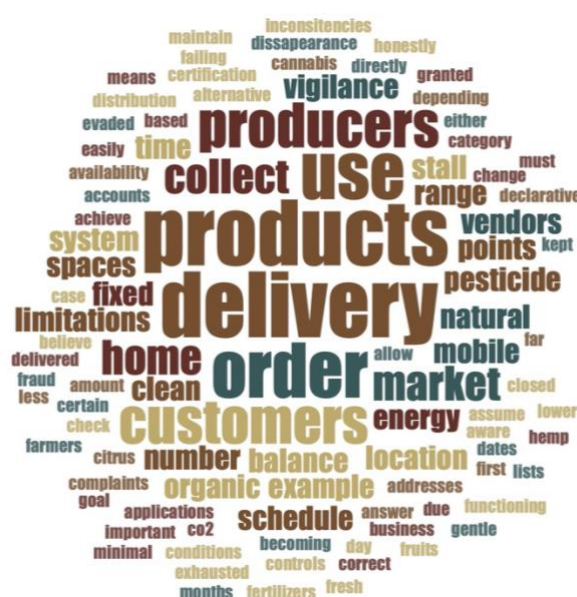
Figure 21: Priorities for growth



This point about scale brings us to the question of where these initiatives are focusing their energy for growth. We asked participants to rank from highest to lowest priority the following four prospects for growth: 1) effective marketing, 2) higher production capacity, 3) logistics improvement, and 4) consumer solvency. Based on relative frequencies, and as illustrated in **Figure 27**, the first priority was effective marketing (38%), followed by higher production capacity (31%), logistics improvement (23%) and consumer solvency (12%). Logistics improvement was without a doubt the second priority (50%) where consumer solvency (23%) took second place while higher production capacity and effective marketing both stood at 15%. In the 3rd rank category, there is a slight difference between the four prospects, with higher production capacity leading with 31% after logistics improvement (30%), consumer solvency (23%) and effective marketing (19%). The lowest priority for 46% of respondents was consumer solvency and effective marketing was not ranked.

These results tell us the following: first, effective marketing is a high priority for the SFSCs and the respondents link this very clearly to their prospects for growth. Logistics are also a top priority as it is consistently ranked across the 4 priorities. Higher production capacity remains constant and this actually help explain why consumer solvency is not very highly ranked. The demand for products in these SFSCs surpasses their capacity to meet it. Whether this is due to an agronomic capacity or

Figure 22: Weaknesses of SFSCs as reported by respondents



Source: NVivo analysis by the authors

Figure 23: Digital technologies used and the purpose of their use



Source: NVivo analysis by the authors

a logistical capacity on the production side requires more attention. When we look at the described weaknesses of the initiatives (**Figure 28**), it is clear that the problem is not with yields but more likely with the distribution aspects of the supply chain and ensuring that the products reach the consumers.

The questions of orders, limited range of products, insufficient vendors, scheduling, energy, fixed spaces and mobile markets all indicate logistical issues in the planning and execution of receiving, processing and delivering orders. When we explore the digital technologies that are used (**Figure 29**), we indeed see the focus on the use of websites and online shops to hold product catalogues and online stores. Facebook is a prominent tool. The core uses seem to be

for information, orders and platforms for payments. It is interesting to note that “nothing” appears quite frequently in the responses and signifies that these digital components typically do not have a role in the quality assurance process.

However, each respondent understood this question differently. For example, one respondent claimed:

central: the means of communication between consumers and our app, but also the means of informing consumers, while being a showcase for producers and stores.

This reinforces the finding that in those SFSCs that are adopting informal certifications and labels, the quality assurance process is much broader than a laboratory test and includes the need for communicating information with consumers as a key element in quality assurance.

Consumption domain: Articulation of values and product quality

These results bring us finally to an analysis of the consumption domain, which appears already quite important for driving the emergence of SFSCs and the demand for quality assurance. In our analysis, we relied upon the actor's own definitions to gather information about the qualities of their products, the use of celebrity spokespersons, the specific quality management practices, their visions for the future and their perception of the economic sustainability of their initiative.

We find that these types of visions are very specific to the initiatives for example, the visions cover a wide range of missions and values:

Mission to feed local people with healthy food and provide work opportunities.

Invest in people, not in machinery. [Independent farmer]

We strive for the promotion of small-scale, sustainable agriculture and horticulture and for the development of local economies. [NGO]

Our mission is to provide our customers with access to ecologically clean, grown and prepared in the spirit of the Bulgarian tradition food. [Limited Liability Company]

"From our farm directly to you": this slogan had a direct meaning 20 years ago, when there was a queue gathering around the Nopria milk truck and every village got their milk, yoghurt or cream supplies. Nopria's family considers it to be a seven-star barn, the aim of which is to produce the cleanest milk in Estonia. [Family Business]

The most comprehensive, successful and mature sustainable development approach in the agrifood sector. [Association]

We believe in collectivism. We dream of a hospitable society founded on self-sufficiency and solidarity, one that does not take advantage of our fellow people or Mother Nature. And we put this into practice starting first with ourselves. Our cooperative community has three interrelated parts: cultivation, education and culture. [Cooperative]

Using a bevy of methods both modern and traditional, we aim for unique, original foods and menus executed well. Given that we define ourselves as a concept, local farm-to-table, we are prepared for every season: cooking with available and abundant ingredients. [Restaurant]

As these quotations illustrate, there are a number of values that are portrayed through these visions that seek to ensure that there are human and cultural aspects to the way that the SFSCs seek to connect producers and consumers.

Through the analysis of our database, we can identify the trends that these quotations illustrate. We find that vision for quality assurance in SFSCs can be summarised as activities that ensure **local, organic, sustainable, healthy qualities** (Figure 30).

Alongside this core vision, a number of additional elements offer insights into the key mechanisms that are to deliver these visions: food should be **natural, fresh, seasonal**. Farming should be **agroecological**. We see social values around **solidarity, community welfare, free and fair** (which typically refer to trading relations). **Transparency, responsible and innovative** are present alongside **traditional, regional and artisanal**. Intermediaries and cooperation remain important. **Friendly** is also used to describe the approach to quality assurance.

We found that consumer feedback is a tool that is highly used by the initiatives in our database and is a fundamental part of the quality assurance process. The descriptions (**Figure 31**) of how users provide feedback are telling of the importance of this role. The first most important way is through **direct contact**. As these initiatives are built mostly on facilitating the physical encounters between consumers and producers, this is also used to provide feedback about product quality and preferences. This type of feedback is feasible as the majority of consumers are **Loyal consumers (44%)** or **Highly Frequent (19%)**. 22% are considered to be regular customers and only 7% are occasional. The remaining 7% were unable to answer the question.

Social media and email or online contact also emerges as very important as we showed earlier that the majority of initiatives are using digital technology in their initiatives. Over half of the initiatives (52%) explained that they do not have well-known spokespersons, while those who responded positively explained that the farmer or the CEO of the company is effectively the spokesperson for their quality. Another common response was that the label/logo was enough of a symbol for the initiative. Only in Croatia does one initiative have a celebrity singer who represents the initiative. This importance of social media and the lack of having external spokespersons demonstrates that these initiatives remain strongly driven by their own members through direct communication and publicity. Social media and digital technologies seem to reinforce these elements.

Figure 1: Visions for SFSC quality



Source: NVivo analysis by the authors

Figure 2: Consumer feedback mechanisms



Source: Nvivo analysis by authors

The final element for analysis of the consumption domain relates to the perceived economic sustainability of the initiatives. We relied upon a segment of a questionnaire that was developed by the social, solidarity economy laboratory in Paris (Le Labo de l'ESS)¹ to assess the sustainability of short supply chains. This consisted of four questions that had five normative responses each. The normative responses enable an assessment of those initiatives that best fit the social and solidarity economy model and those who have other priorities. The questionnaire and analysis is found in Appendix F.

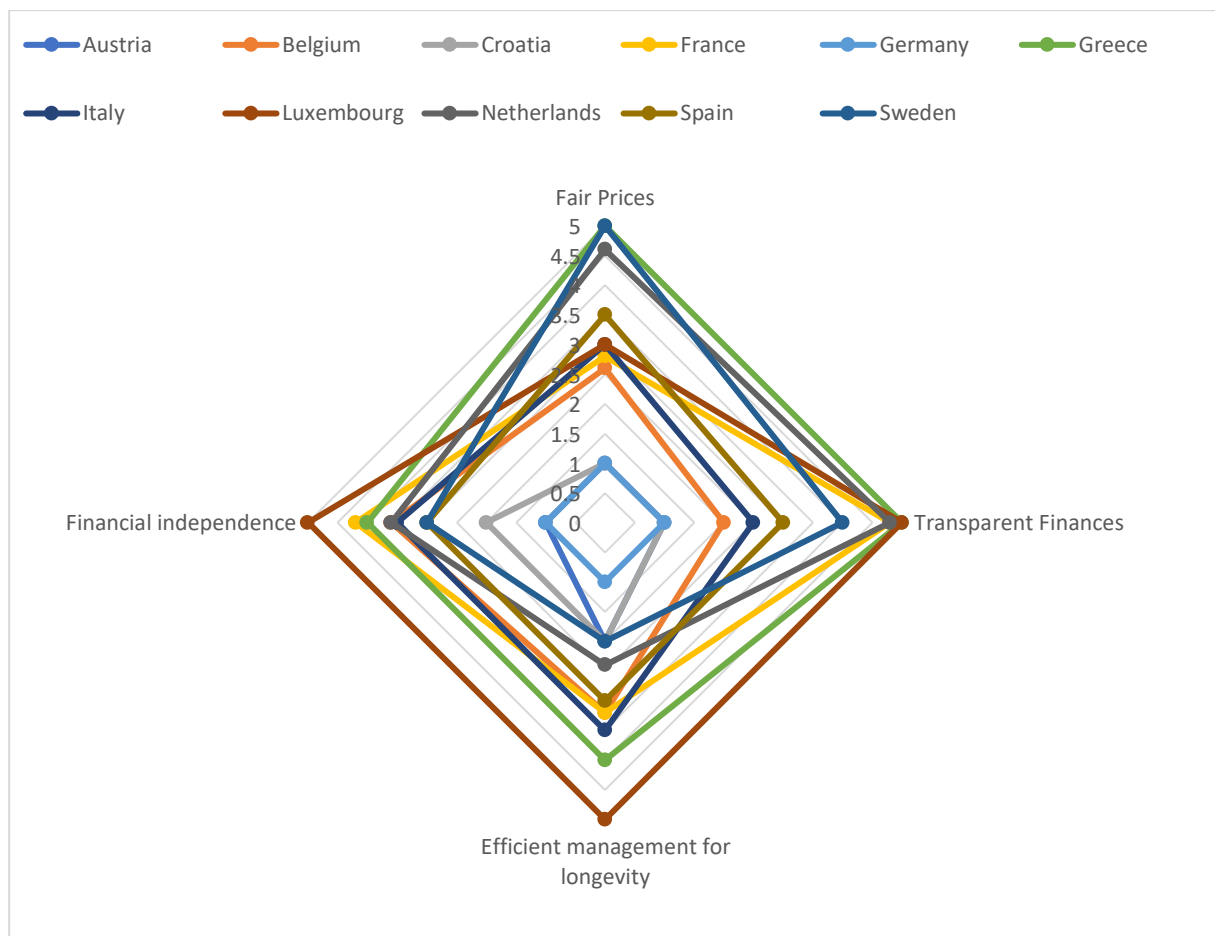
The questions were:

- Does your initiative set a fair price that is established by, and through negotiation between, the different parties to the exchange (members, producers, consumer)?
- Do you know how the finances are divided between the funding of the initiatives activities and the allocation of profits?
- Does the management of your initiative bring efficiency, lower costs and ensure greater affordability of products and/or services, and does it promote the longevity of the collaboration between the different value chain actors?
- Does the economic model of your initiative enable financial independence?

We have averaged the data at country level in order to produce a comparative chart of the initiatives (**Figure 31**). This data comes from those who filled in the online questionnaire directly (n=27). The radar chart highlights that no country has full economic sustainability. It is difficult to discern the weakest element, as the average across all countries and initiatives is about 3,0. This suggests that there is a wide range of diversity in how these initiatives organise the financial aspects of their initiatives and how the visions of fairness are represented in the pricing models of their products. The top performing countries are Greece and Luxembourg, but they seem to be opposites in terms of fair prices and efficient management for longevity.

¹ <http://www.lelabo-ess.org/-circuits-courts-economiques-et-solidaires-cces-.html>

Figure 3: Country comparison of Economic Sustainability

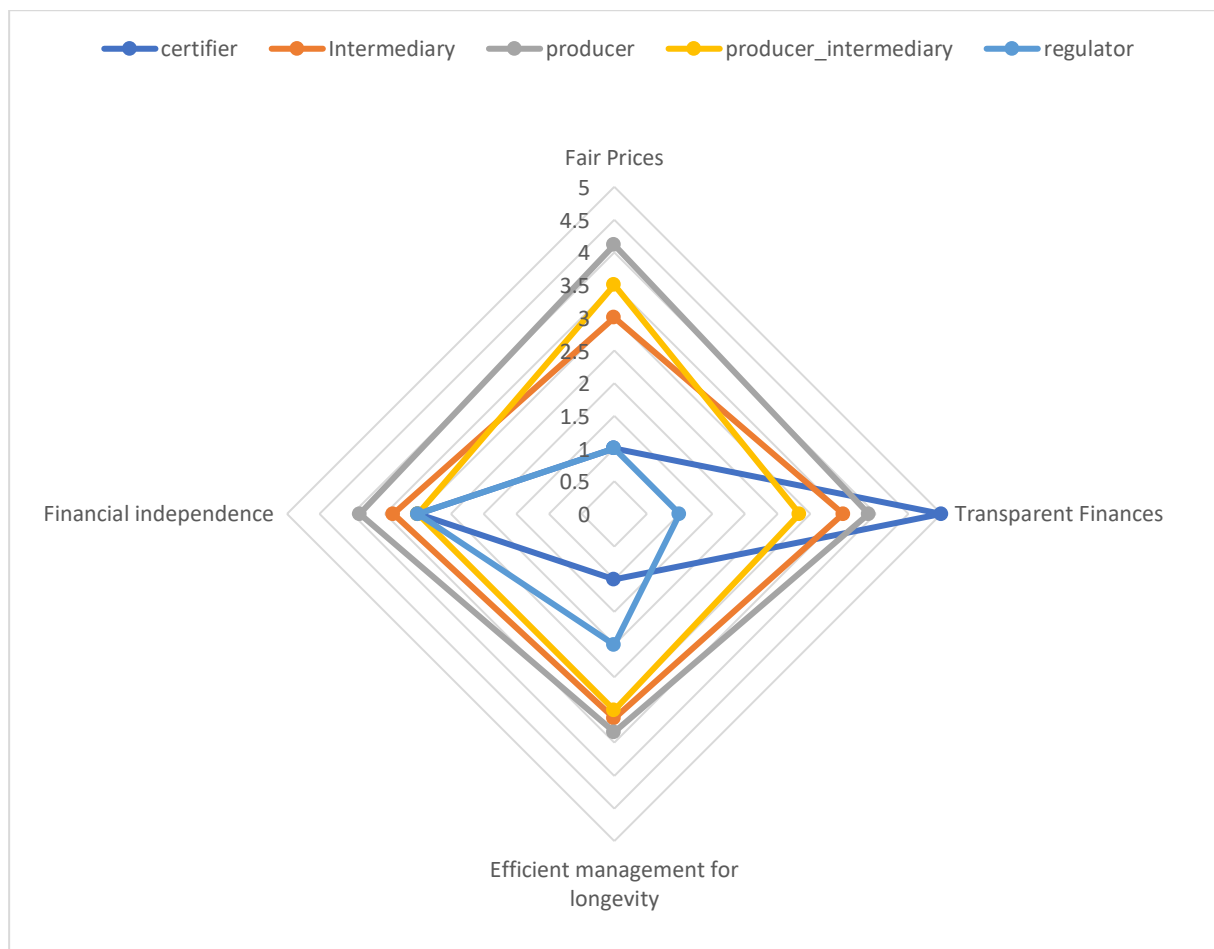


There are two clear outliers in this analysis. The first is Germany, which as a country had received a very positive ranking in terms of institutional environments. The data from Germany relies upon just one response, which is a one-person organic vegetable trade and delivery service, thus not representative of either the German cases or the entire database.

Second, there are three individual cases that have scored 100% - 2 in France and 1 in Spain. Both of these are in countries that have received a high ranking in terms of institutional environments. All three are cooperative models, one of these is an association of producer cooperatives. The French cases are producer-intermediaries, and the Spanish case is an intermediary. Two of them (1 French, 1 Spanish) use participatory guarantee systems to assure quality. In France this is done through a network of producer cooperatives and in Spain it is a specialty shop that is a consumer cooperative. The second French initiative is a **vegetable craftsman**, which offers a “reinsurance on the human dimension of the company”.

In order to get a better understanding of economic sustainability according to who is leading the initiative, we have recalculated the scores according to actor role (**Figure 32**).

Figure 4: Economic sustainability according to actor role



A few interesting insights can be gained from this revisualisation. First, certifiers know all of the stakeholders who fund the initiative and the destination of profits as it is stipulated in their agreements. Regulators, however, do not have this information. Both types of actors claim that the collaboration and dialogue within the initiative promotes financial independence as a goal.

Second, producers are consistently the best performers and are generally seeing real economic gains that benefit all stakeholders. The access to information seems to be inconsistent, but the producers are generally well informed about the economic sustainability of the initiative. The price is set in a transparent and participatory manner among several key actors, but not with all value chain actors. Finally, capital is managed collectively between different stakeholders and provides the initiative some form of financial autonomy.

Finally, the most frequent response among the initiatives points to a persistent challenge: While the economic model is focused on strengthening the local food system, they face constraints for achieving efficiency improvements and equitably shared benefits. There is no long-term collaboration or organizational sustainability in the majority of initiatives (56%).

A typology of SFSC quality assurance

One of the core insights gained from this study is that consumers are present in the quality assurance schemes, mostly in terms of being the *users* of information about the initiatives. However, they are not leading the initiatives. Not a single example in our database has identified as playing the role of a consumer. However, we do have consumer cooperatives who are categorized as intermediaries or as producers. This is also true of the regulators and certifiers. These two categories were rarely used and if so, they were engaged in public farmers' markets (regulators) or participatory guarantee systems (certifiers).

Based on these insights and trends that we tracked in the data, we have developed three types of SFSC quality assurance based on observed characteristics of the initiatives in our database. (Figure 31). This typology reflects the four domains of action from our conceptual framework. The network maps used to establish the contents of the matrix is found in Appendix A.

Table 1: SFSC quality assurance typology

	Farm Focused	Market Quality	Collective Market
Actor role	Producer	Intermediary	Producer-intermediary
Control System	Decision-making groups, general assemblies, labels	B2B, PGS, consumer regulated, social control	TPC
Legal entities	General partnerships, no legal entity, independent farmers	Limited liability companies, cooperatives	Cooperatives, Non limited liability, association
Intermediation	Information-rich, Socio-cultural	Diversified	Interactive, Socio-cultural
Length of chain	Short, medium	Medium, short	Short
Digital tool use	Marketing, information	Quality assurance, traceability	Marketing, information
Traceability	Farm visits, transparent communication, newsletters	Online forms, inspections, asking farmers, documents, lot numbers	Site visits, workshops, community engagement, videos, transparent information
Vision of quality	Sustainable	Local, taste	Organic
Growth prospects	Consumer solvency	Higher production	Effective marketing
Economic sustainability	Average [3,8/5]	Average [3,25/5]	Average [3,08/5]

Case studies

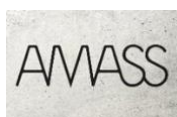
In order to draw specific lessons for the Hungarian experience, we selected a sub-set of 10 initiatives that could be explored in-depth, through qualitative interviews, in order to understand the particularities about their quality assurance systems and the challenges that they have faced throughout their development.

Due to a low response rate, we were only able to interview 4 out of the 10 initiatives. The remaining 6 were completed by collecting data from existing studies, project reports, training material, websites, social media posts, YouTube videos, TripAdvisor and Google comments, and other secondary sources (see the full methodology in Appendix A). The cases were selected in order to demonstrate a diversity of the types of SFSCs found in our database.

In this section, we provide 1-page summaries of each of the 10 cases highlighting the aims and approaches used in each case. We detail how the quality assurance works and we explain the advantages and disadvantages of each case. An important point to note is that the majority of these initiatives were created after 2013, which suggests that we are still within this wave of innovation and this also reflects the third wave of new initiatives noted in the full database.

Table 2: Case studies summary

Name	Year	Country	ActorRole	SpecActivity	LegalEntity
Amass Restaurant	2013	Denmark	producer-intermediary	Restaurant, urban farm	LLC
Apo Kinou	2013	Greece	Producer-intermediary	Farm, Processor, Shop, Community education	Cooperative
BEES Coop	2014	Belgium	intermediary	Cooperative supermarket	cooperative
Dalmatija Eko	2010	Croatia	intermediary	Farm, Farmers' market	Cooperative
Etiquettable	2017	France	certifier	Responsible consumption referee	Social Enterprise
Himmel & Erde	1997	Germany	Producer-intermediary	Farm, Farm Shop	Sole trader (e.K.)
Le Zolle	2008	Italy	intermediary	Distributor	LLC
Los Perros Urban Farming	2015	Sweden	Producer-intermediary	Farm, Farm shop, café, REKO-ring	Cooperative
METRO Bulgaria	2017	Bulgaria	intermediary	Wholesale, supermarket	Joint stock company
Mola de Baix	2015	Spain	producer	Farm, PGS certifier	Association of farmers



“Is this the most responsible way to approach this situation, and is this as delicious as we can possibly make it?”

Description: “What happens when the word responsibility becomes your mantra? When every aspect of running a restaurant becomes a conscious effort to do better on behalf of our environment. This is Amass in a nutshell. We refer to this mindset as “Responsible Deliciousness” and it fosters our culture and drives our creative process. Instead of a quest for the perfectly shaped vegetable, it’s what we can do with the stems of kale or the miso we make out of our lemon skins. The so-called “by-products” that we produce and the processes we put them through are what drives our creativity. And because of this, we have been able to reduce our waste by 75%. But sustainability is more than the physical action of making miso from coffee grounds or nori from kale stems, it’s a frame of mind, and it has become an intricate part of our culture at Amass. So much so that we can’t imagine any other way of working.”

Quality Assurance: Sustainability is about doing what’s right for the environment – this is their core quality concern. There are two approaches to doing this. The first is relying upon external third-party certifications. The most important is the **Gold Organic Certification**, which is the Danish Ministry of Environment & Food’s public organic standard. 90%-100% of all foods and beverages that they serve are certified organic. 95% of their produce is from Danish farmers or purveyors and all of their meat comes from farms or butchers who prioritise ethical animal husbandry. They only source fish caught using responsible and low intervention fishing methods – line caught, gill or seine nets and they do not purchase any farmed fish. San Francisco-based **Zero Foodprint** and Copenhagen University have helped them to track and significantly reduce greenhouse gas emissions. The second approach is **direct vetting** of most of its purveyors, including foragers, hunters/fishermen and vintners, to insure their agricultural or gathering practices has both product quality and environmental responsibility in mind. Amass also supports small local farmers who take the time and financial risk to raise heritage crops and breeds. Amass also has its own urban garden and greenhouse that 80 different varieties of plants, including leafy vegetables, berries, herbs, and flowers. Thus, they rely upon their **own knowledge and farm visits** from the community to ensure organic practices. They also implement a circular economy between the restaurant and garden and focusing on zero waste and recycling (food, energy and water).

Advantages: The concept of the restaurant is driven very much by the motivation of the chef/owner, which means there is strong leadership. The flexibility of the chef to change their menu very often, enables them to source small quantities (even 5 kg of carrots) based on the producers’ availability. Over the past three years, they’ve reduced their waste by more than 75% (only 22% now goes to the landfill, as compared to the 80% average for restaurants) and their annual water consumption by 5,200 litres. They were awarded “Sustainable Restaurant of the Year 2017” by The White Guide Denmark.

Challenges: The restaurant is very expensive (Price range is €93 - €134 and \$\$\$\$ in TripAdvisor) and the negative comments (only a few) in TripAdvisor point to an over ambition towards recycling waste back into dishes that do not meet taste or quality expectations.

Key Facts

Name: **Amass Restaurant**
Year Est.: **2013**
Country: **Denmark**
Inst. Env. Rank: **7**
Producers: **No info.**
Consumers: **18.347 FACEBOOK, 7,567 Twitter, 91.8k Instagram followers**
Actor Role: **Producer-intermediary**
Control: **TPC, Internal**
Label: **Organic**
Legal Entity: **LLC**
Intermediation: **Socio-cultural**
Chain length: **Short**
Digital: **Information**
Traceability: **Site visits, workshops**
SFSC Type: **Collective Market**
Vision:

zerowaste
responsibly
carbonneutral
organic
sustainable



"We believe in collectivism. We dream of a hospitable society founded on self-sufficiency and solidarity, one that does not take advantage of our fellow people or Mother Nature."

Description: Apo Kinou means together. "Our cooperative community has three interrelated parts: cultivation, education and culture. Cultivation (production and catering): the **farming of fresh, good quality and nutritious products with natural techniques**. Education: schooling that implements **alternative teaching techniques** that above all are **just** and based on **love**. Culture: the spread of **traditional arts, crafts and cultural progress**. The underlying purpose of our cooperative is to put in place the foundations for an autonomous and harmonious micro-economy that is opposed to profit-making and deception. We cultivate and by doing so we are an active part of the community we live in and its people. All the Products are exclusively made from our own raw materials. "Apo kinou" cultivates exclusively local, traditional varieties of seeds and excludes the use of hybrids. We use natural, ecological methods, without fertilizers or pesticides, and with utmost respect to man, animal and nature, constantly aware of and trying to reduce our ecological footprint. Wherever possible we incorporate the planting of a variety of species, side by side, rather than monocultures, to increase the biodiversity and soil quality. It is of utmost importance to us to constantly try to reduce our ecological footprint and stay local. We don't use cheap labour and we do not exploit our producers."

Form of Quality Assurance: Apo Kinou is a self-sufficient social cooperative of 30 members who take decisions collectively through frequent cooperative meetings. There is no formal quality assurance program. However, there are 30 people active, of which 15 have jobs working in the cooperative activities. This means they have direct contact among the producers, artisans, food service and consumers. They participate in bazaars (annual local Bazaars in local villages), Eco-festivals (En oiko), seed-sharing festivals (Peliti) but also in organizing debates, seminars and exhibitions. They cater for small groups, festivals or gatherings with traditional Crete dishes. They have their own van for deliveries within their 'circle' direct sales group. They operate a food processing and preparation center and the Rovythi (chickpea) café in downtown Heraklion where they serve their own products and Fairtrade products. They believe that it is of utmost importance to gain trust in and knowledge of where food comes from, so they highly encourage people to visit the farms, to talk with them and to join the budding community.

Advantages: This vertically integrated model works very well in the local Heraklion economy, which is dominated by tourism. It provides employment and collective decision-making that allows all members of the cooperative to contribute to activities across the supply chain and to earn a decent livelihood.

Challenges: Some of the advantages are also challenges, as there is a lot of volunteer labor in addition to the paid labor and the cooperative is very time consuming. During the field visit, the difficulties of collective decision-making were highlighted as a manageable challenge. COVID has adversely affected the tourism industry in Crete and thus the catering and café businesses have suffered. But the local market served through the circle has remained operative, as have the farms.

Key Facts

Name: **Apo Kinou**
Year Est.: **2013**
Country: **Greece**
Inst. Env. Rank: **6**
Producers: **30**
Consumers: **30 + 10,000 through catering/café, 9049 FACEBOOK, 324 Instagram followers**
Actor Role: **Producer-intermediary**
Control: **Producer-led decision-making groups**
Label: **Own Brand, Fairtrade**
Legal Entity: **Cooperative**
Intermediation: **Socio-cultural**
Chain length: **Short**
Digital: **Information**
Traceability: **Site visits, workshops**
SFSC Type: **Collective Market**
Vision:





"We will be the first cooperative supermarket, participative and non-profit making in Brussels."

Description: The main mission of the cooperative supermarket is to allow every citizen to buy quality food - mostly organic and local products - at affordable prices (up to 30% lower than the market average). This objective is strictly linked with a strong attention for producers - assuring them fair prices and supplying conditions - and the environment – preferring purchasing in bulk. The business model is innovative for a supermarket. The consumers have a triple hat of consumers, owners and managers of the cooperative. They are thus called **co-operators**. Strategic decisions are collectively made during the participative assemblies while the several work groups and the coordination group make the day-to-day decisions. Members are asked to work as volunteers in the store for 3 hours per month. A team of professionals (8 staff) ensures the main and technical tasks. This guarantees cost savings for the cooperative and reduced prices to consumers. Membership shares start at €25 (€100 suggested). The initiative started with 300 members and has grown to six times that size. The mission is thus to allow consumers to regain an active role in consumption, driving it towards a new sustainable path for people and the environment; and to demonstrate that a different way of making business in retail sector is possible. BEES coop considers itself a plausible part of the solution to societal issues and challenges such as the struggle for the right to quality food, the improvement of the image and liveliness of under-privileged neighbourhoods, a strong citizen implication, and finally, the development of a circular, sustainable economy, promoting solidarity and benefiting both consumers/co-operators, farmers/local producers and the environment.

Key Facts

Name: **BEES Coop**
(Brussels Ecological and Economic Solidarity Cooperative)
Year Est.: **2014**
Country: **Belgium**
Inst. Env. Rank: **4**
Suppliers: **15 (in 2020)**
Consumers: **2000 (in 2018), 15.489**
FACEBOOK, 669 LinkedIn followers
Actor Role: **Intermediary**
Control: **TPC, Internal control**
Label: **Organic, Fairtrade, Faire4Life, SPP, Certisys, Biogarantie, demeter, Financité & FairFin**
Legal Entity: **Cooperative**
Intermediation: **Diversified**
Chain length: **Short, Medium, Long**
Digital: **Information, Management**
Traceability: **Documentation**
SFSC Type: **Market Quality**
Vision:



Quality Assurance: Consumers are highly involved in the quality assurance because during their monthly 3-hour shifts, they can be assigned to dealing with the purchasing slips and ordering products. They also must unload trucks and stock shelves, which enables them to interact with some of the small producers who supply the supermarket. Some of these producers are also members, however, 80% of the products are purchased through wholesalers. This means that they rely heavily on the third-party certification (a range of labels) carried out by their suppliers in order to ensure quality. Only members are allowed to shop, so this exclusionary criterion keeps trust and interaction high among members.

Advantages: There is a strong system of governance and accountability, with sanctions for missing shifts and different membership fees for different size families and different economic circumstances. The model that relies upon third-party certifiers ensures a wide range of products (over 3,000), which means that consumers can access the majority of their food needs.

Challenges: Producers have complained that the dominance of consumers in the governance of the cooperative means that they are too price conscious and the producers are still not always receiving adequate remuneration. Action-research from 2018 found that BEES Coop is still not as inclusive as imagined, and thus doesn't yet reflect the socio-cultural and economic diversity of their neighborhood.



"Organic agriculture is the only model of agriculture that cares about our national treasure - soil fertility, diversity of agroecosystems, clean water and air and other important resources, using them sustainably and improving them. As such, it should take the place it deserves in the eyes of the public!"

Description: The Association of Organic Producers of Dalmatia was founded with the aim of improving organic production and encouraging the development of organic agriculture in four counties: Split-Dalmatia, Dubrovnik-Neretva, Zadar and Šibenik-Knin. Since 2010, in close cooperation with local and regional government, the association has organized:

- trainings and workshops for its members and the interested public about technologies in organic farming
 - "Academy of Organic Agriculture", three-day education in cooperation with JU RERA, Ecologica, IFOAM
 - several study trips on topics of successful environmental agricultural practices
- promotion of organic food in the media
 - **"I have the right to eat healthy"** campaign
 - introduction of organic breakfast in primary schools
- since 2016, the association has been organizing a two-day fair of ecological products **EkoFjera** in the historic Prokurative of Split. An event where more than 50 Croatian organic producers exhibit. The goal of the event is to promote organic agriculture and connect producers with consumers. Consistently high attendance recorded with 10,000 consumers attending the **Eko Brunch** in 2019.
- Since 2019, the Association started with the direct sale of its members' products at the weekly **Eko Pazarić** farmers' market that takes place in the Mall of Split. In November 2019, they began a box delivery scheme, based on the French AMAP and Italian GAS models.

Key Facts

Name: **Dalmacija EKO**
 Year Est.: **2010**
 Country: **Croatia**
 Inst. Env. Rank: **8**
 # Suppliers: **50**
 # Consumers: **10,000 @EkoBrunch 2019, 3086 FACEBOOK followers**
 Actor Role: **Intermediary**
 Control: **TPC**
 Label: **Organic**
 Legal Entity: **Cooperative**
 Intermediation: **Diversified**
 Chain length: **Short**
 Digital: **Marketing (through Facebook)**
 Traceability: **TPC Audits, Site visits**
 SFSC Type: **Collective Market**
 Vision:

zerowaste
responsibly
carbonneutral
organic
sustainable

Quality Assurance: All products must carry the EU Organic label, so they must be **certified individually** by one of the 12 certifiers accredited in Croatia. Dalmacija Eko spends most of its energy on getting members certified. In the Solidarity Ecological Group through which customers can directly procure the products from members. The goal of the Group is, **direct** and **continuous** purchase of **organic food at affordable prices**, support and strengthen **small, domestic, ecological artisans**. The group brings together consumers and producers of organic food who are in the process of exchanging create an intimate relationship based on trust, transparency and solidarity. Producers adapt their cultivation to the needs of consumers from the Group and consumers guarantee safe product placement. Consumers order products by entering an order via the internet group page where offers are published every week and for which an updated link is sent every week by email. Online orders ensure realistic quantities and consumers receive a 15% price reduction compared to the farmers' market stand price. Consumers have the right to visit the farms in order to learn about the organic practices.

Advantages: A change in public regulation forced the association to take over the organization of the yearly EkoFjera, which has helped to strengthen the farmers' organization. The diversification of markets has also helped to increase the frequency of the markets and visibility with tourists.

Challenges: The removal of public funding has made organization difficult. Also, with the increase in markets, they do not have enough fresh produce farmers to meet demand. Coordinated logistics has not yet been worked out and due to the communist history, the older generation of farmers are not willing to join the youth-led cooperative. **Economic sustainability was valued at 1,2/5 on the ESS scale.**



Etiquettable®

“Mobile application created by food and environment enthusiasts, who want to offer an alternative to guilt when it comes to eating more sustainably”

Description: Created in 2009, Eco CO2 is social enterprise « **Entreprise Solidaire d’Utilité Sociale** », which designs and implements actions aimed at accelerating the ecological transition through changes in behaviour. In particular, they offer awareness-raising programmes aimed at local communities. With funding from the French Environmental agency, in 2017, they created the Etiquettable mobile application which aims to contribute to a more sustainable diet and seeks to bring together disparate information on cooking, the environment and nutrition. It therefore offers the functions of many others in one: a **list of seasonal fruit and vegetables** as well as **nutrition information, endangered fish species, sustainable recipes** to share and rate, **geolocation of committed restaurants, sustainable cooking tips** and various other information. The app was user-driven in its design (users tested the app at different stages of development) and it includes recipes and tips from chefs committed to sustainable cooking. Underlying this app there is an impact and recipe sourcing calculation, which is based on the food databases of the French Food Safety and Environment authorities. A scientific committee works with the developers to conduct continuous food impact assessments and research on the impact of public information and communication about nutrition and environmental qualities of food. The application is interactive and allows all users to add new food, tips, recipes, restaurant reviews, etc. that builds the community trust.

Quality Assurance: There is an underlying charter that details the ways in which the app works and what types of businesses are included in it. On top of this, there are three forms of quality assurance. 1) all of those producers who have achieved level 3 of the public HVE certification system (**High Environmental Value**) are automatically added into the database with the HVE notation. 2) restaurants who are audited by the **Écortable** initiative (i.e., a 3-star labelling system focused on environmental impact) are included with this notation. 3) Users propose new producers, retailers and restaurants. The user fills out an online referral form, which is reviewed by the Etiquettable team. Therefore, they rely mostly upon the expert recommendations from third parties (either public or private) who are conducting audits and certification. However, their most important quality assurance is based on their feedback mechanism. The consumers/users are active in posting comments in the app about the restaurants or the producers (who are usually operating box schemes). If there are consistently negative comments, businesses are removed.

Advantages: The app has been developed with public funds and in close collaboration with researchers, so the scientific base is sound. The company is not seeking to make a profit, but there is a long-term financial plan to keep the app free, without adds, but financially viable.

Challenges: The main form of control that the app developers have is based on the self-declarations. This is a risk with regards to ensuring that all of the included restaurants, producers and retailers are meeting the sustainability objectives. They thus need to rely upon working with external partners who develop certifications and labels. **Economic sustainability was valued at 2,25/5 on the ESS scale.**

Key Facts

Name: **Etiquettable**
Year Est.: **2017**
Country: **France**
Inst. Env. Rank: **4**
Suppliers: **4750 Producers & Shops, 1000 restaurants**
Consumers: **7835 FACEBOOK followers, 2186 Instagram followers**
Actor Role: **Certifier**
Control: **Consumer regulated, TPC**
Label: **High Environmental Value, Organic, Écortable**
Legal Entity: **Social Enterprise**
Intermediation: **Information-rich**
Chain length: **Short**
Digital: **Information, Marketing, Evaluation, Consumer feedback**
Traceability: **Documentation, Environmental audits by Écortable**
SFSC Type: **Market Quality**
Vision:

local food
awareness
sustainable



"The quality and origin of the products are very important to us.

Natural and gentle."

Description: Himmel & Erde means Heaven and Earth. "Our company has been marketing our own farm products on our own farms in Troisdorf-Eschmar and Niederkassel-Stockem since the early 1990s. In 1997 the first farm shop was opened in Eschmar. Stockem followed in 2000. Our farm, Klostergut Presenzhof, produces asparagus, potatoes and free-range eggs from the point of view of integrated farming. To this end, we give top priority to maintaining the health of plants and soil. For example, gentle and minimal treatments with pesticides are only carried out when natural resources have been exhausted. We also carry out field trials and seed propagation on this farm. There is also a horticulture farm. Over time, we have been able to add more high-quality regional products from other farmers to our range. In order to be able to offer you a special variety, you will find everyday products with us. Be it daily freshly baked organic bread from Hennef, fresh milk and milk products from the Bergisch region, fresh beef, pork and poultry from the Eifel, as well as fruit and vegetables from the region."

Quality Assurance: It appears that quality assurance is carried out mainly on agronomic practices and they use narrative forms (explanations of practices) to communicate that quality. They practice integrated farming, which means that maintaining the health of soils and plants is given top priority. They work according to the principle of so-called "integrated plant protection", only after all-natural possibilities have been exhausted are the use of gentle plant treatment agents and selected mineral fertilizers if necessary. They conduct field tests to experiment combining harvesters and root crops in order to reduce even more the reliance on external inputs. Due to the great demand for free-range eggs, they have been keeping chickens ourselves since 1999. There are now 800 laying hens living on their chicken meadow in Niederkassel-Stockem. They spend the night in a stable where they lay their eggs in spacious nests. The special thing about the stable is its mobility. In contrast to the keeping of chickens in permanent buildings, their chickens are allowed to move to a new pasture every year. This has two main advantages: A regular change of meadows is good for the health of the animals and it benefits the ecosystem, since the droppings on the meadows are kept as low as possible. In the subcontracting sector (purchasing from other producers), their focus is on soil cultivation and stock maintenance with proven machines.

Advantages: This model allows a direct sales point for farm products and offers a physical site for the potato and asparagus festivals, which are well known within the community and also attract tourists. Their range of products is very good for their rural location between Cologne and Bonn. Their experimental approach to seed propagation offers them a chance to develop new varieties and sell seeds.

Challenges: It seems that there is no strong quality assurance programme in place and there is no use of external labels for quality. The origin story of the products that they sell, which is told directly by employees, seems to be the strongest form of communication. The comments on Google Maps are mixed (4.2-4.3 stars), most comments point to excellent quality – particularly for the eggs, milk and cheese. Others say that the prices are too high. There seems to be little traceability for products not grown on their own farm (one comment lamented poor-quality tomatoes from the Netherlands).

Key Facts

Name: **Himmel & Erde**
Year Est.: **1997**
Country: **Germany**
Inst. Env. Rank: **2**
Suppliers: **No Info**
Consumers: **No Info**
Actor Role: **Producer-Intermediary**
Control: **Internal**
Label: **Own Brand**
Legal Entity: **Sole trader (e.K.)**
Intermediation: **Interactive**
Chain length: **Short**
Digital: **Information**
Traceability: **Farm visits**
SFSC Type: **Farm First**
Vision:





"I know agronomists who know farmers who know farms. I know technicians who know other farms so much that I can do a series of cross-references on the farms we work with to uncover any problems in our supply."

Description: It is an enormous source of wealth to be able to **eat food that varies from season to season**, produced by farmers who cultivate it according to the **characteristics of their land**. It comes about because the wellbeing that food can bring also depends on the **human relationships** underlying its production and consumption. When these relationships are direct, clear and conscious, the exchange becomes **an exchange of life experiences**. It was created because money spent on food that is good for you is money well spent. It was created to support a market committed to limited, diversified and artisanal production. It was created because we believe that food is good when it **tastes good** and is **good for the health** of those who eat it, when it is **good for the environment** in which it was produced and for the **economy** of which it is the fruit. Zolle selects farms and delivers their products via bicycle (391 tons per year of fruits and vegetables) to homes in Rome every week. They also sell from the company store once a week. When consumers purchase food from Zolle, they are assured of the real quality of their food. They receive direct information on ingredients and production methods for each product. They promote agriculture that respects the land and the seasons. They support the cultivation and diffusion of local varieties and breeds and they reduce the transportation of food.

Quality Assurance: There is an undocumented, but systematic, quality assurance program put into place by the head of Zolle.

This evaluation system takes into account social, economic and environmental parameters of product quality. Most labels do not pay attention to the questions of economic fairness (particularly in terms of being **legally employed** and receiving a **living wage**), which is important for them. So, they are interested in everything beyond organic. They have always been interested in **social equity** and **economic fairness** of the company, the **economic impact** of the company on the territory and the **social impact** of the company **on the territory**. These are things are assessed during their site visits, which happen before a producer is included in the system. They use a digital system whereby each company has a self-completed profile. When Zolle staff goes to the farm to visit, the profile quickly enables the visitor to ask questions about each of the critical factors for each sector and the profile is updated by Zolle. They don't do lab tests for residues, as these only tell you information after the fact. They work with farmers as far away as Sicily, but they specifically rely upon the local network of farms because it allows for a stronger control of their practices through peer pressure. The main form of control thus goes beyond the direct relationship with the company to rely upon feedback from other actors in the network (cross-sectionally).

Advantages: Through this approach, Zolle has been able to ensure complete and traceable knowledge of the farms and provides this information to the consumers. An important lesson learned by taking this interactive approach is the importance of professionalism. It is not enough to be motivated to engage in a SFSC, one also has to be good at what they do and be professionally motivated to do it. Zolle thus hires a bike courier service for deliveries, as their riders are trained professionals.

Challenges: They have their shop in their warehouse, but they have now outgrown the warehouse and needed a new space. However, the bureaucratic administrative difficulties of opening a new space took a very long time and the prices of shop space is prohibitive. **Economic sustainability was valued at 3,75/5 on the ESS scale.**

Key Facts

Name: **Zolle**
Year Est.: **2008**
Country: **Italy**
Inst. Env. Rank: **3**
Suppliers: **80 producers, 15 cyclists**
Consumers: **18p00 consumer families; 14,217 FACEBOOK, 2,120 Instagram followers**
Actor Role: **Intermediary**
Control: **Internal**
Label: **Brand**
Legal Entity: **LLC**
Intermediation: **Diversified**
Chain length: **Short**
Digital: **Information**
Traceability: **Site visits, digital app**
SFSC Type: **Market quality**
Vision:

good
fair
ecological
healthy
sustainable



"Trust the person you're buying from, trust the person buying from you, abide by the rules"

Description: "Largest commercial urban farm in Sweden, where we grow a wide variety of crops, which we sell to restaurants and the local community. We run our urban farm using only hand tools (machine free), and by using only sustainable types of fertilisers such as manure, compost, and worm compost. All of the deliveries are done by bicycle, making the entire process from seed to table as green as possible. We show how small-scale farming and direct contact with consumers is a more sustainable way of living and growing. We sell our produce and products (and other stuff) directly to customers by webshop and at their vegan restaurant (Flax - Café & Farmstand). The goal with our restaurant is to create a space where everything is local, produced on a small scale, sustainable, and of course offers a vegan menu. There, we offer lunch, fika, fresh seasonal veggies, as well as sustainable products, growing kits. All from our farm, we sell products like kimchi, sauerkraut, chilli sauce, herb salts, marmelades, and more."

Quality Assurance: Given that they are the farmers of all of the produce that they sell. They rely upon their knowledge of permaculture farming practices and do not need to check on others. However, for their consumers they have to ensure that consumers believe them. Therefore, they use REKO-ring in order to sell their products directly (outside of their on-farm shop and in their own café). The ring is based on a closed Facebook group. The producer and consumer who want to take part apply for membership in the group he or she likes. Administrators, often a small group of consumers, approve the application from serious people and thereafter trade can begin. Normally delivery occurs every or every other week, depending on the size of the group. One of the guidelines is that it is free to be involved with REKO-ring and that you need to be transparent. So there needs to be a trust built between both parties that every sale is between. The person selling and the person buying are supposed to resolve quality concerns amongst themselves, neither party can lodge a complaint with the administrators.

Advantages: About the same amount of time put into preparing for participation in a farmers' market, but there is no waste and you are prepaid for what you will bring to the market. Time management is easier also as it has distributed hours throughout the week (and about 1-hour drop-offs) rather than a full day once or twice a week.

Challenges: Missing the socio-cultural component of a farmers' market. Difficulties as administrators of the group in drawing the line about what to allow to be sold. They are supposed to be local, but can they sell coffee or kombucha if the raw products come from far away, but the processing is done locally? Another example is hunters selling meat to butchers, who then are selling online. They become intermediaries. Also, the definition of small scale, which is a fundamental element of their model is difficult to control sometimes. However, the experience is that when producers grow too much, they tend to not need the platform and they leave on their own.

Key Facts

Name: **Los Perros**
Year Est.: **2015**
Country: **Sweden**
Inst. Env. Rank: **4**
Producers: **283**
Consumers: **24,383 ; 14.1k**
Instagram, 1590 FACEBOOK followers
Actor Role: **Intermediary**
Control: **None**
Label: **Own Brand**
Legal Entity: **Cooperative**
Intermediation: **Socio-cultural**
Chain length: **Short**
Digital: **Marketing**
Traceability: **Internal**
SFSC Type: **Farm First**
Vision:

smallscale
seed2table
directcontact
sustainable
urbanfarming



"What differentiates us from other systems is that our way of producing passes through the filter of everything collective and that is always a guarantee."

Description: Sistema Participatiu de Garantia Ecollaures is a participatory guarantee system (PGS) that covers the Valencian territory based on the pillars of self-management, agroecology and food sovereignty. A group of about 20 farmers produce vegetables and fruits on small local farms and handmade products (bread, honey, jams, ferments, oil...) based on the logics of agroecology and food sovereignty – they first produce for their own consumption, then they sell surplus in cooperatives, consumer cooperative stores, through box schemes and via retail orders. They maintain flexible relationships with the consumers of their products as the intent is to build a community food system among producers and consumers. ECOLLAURES PGS is a self-managed initiative whose aim is social transformation, influencing the citizen interactions that are generated around agro-ecological production and agro-ecological consumption. This means short distribution channels, inclusion of small-scale producers and processors, social justice and horizontal relationships among people. It means that their work is a social, cultural and economic activity in defense of the values of agroecology and active participation in the functioning of the ECOLLAURES PGS. Their vision of agronomic practices is to do things by disturbing the environment as little as possible. Prices are not set according to demand; they are the same all season and are based on the real costs of production. They carry out more than 30 projects for social transformation that include 1000 people/month, 150 workers, 12 counties and 15 consumer groups.

Quality Assurance: Quality assurance is carried out through their core mechanism of governance, the **general assembly**, where all decisions are taken unanimously (in the Catalan tradition). Sometimes there are many rounds of discussion in order to arrive at a **unanimous decision**. The core element of assurance is the **practice guide** that is common to the PGS, but each producer must write their own guide based on the reality of their agroecological activity. Beyond these two elements, there are four committees the ensure quality: 1) **The admissions committee**: responsible orienting new members to the requirements and mechanisms for participation; managing project dynamics; 2) **The quality committee**: accompanies project development, post-visit follow-ups, and grants the label; 3) **The information committee**: in charge of communication, of disseminating the vision and the work that is carried out; 4) **The visit committee**: formed by members of the different commissions, as well as producers, consumers and other agroecology collectives. There are typically 2 producers and an external evaluator who carry out the 6-month visits of the farms. These are learning visits to guide the producer.

Advantages: The participatory model ensures the involvement of consumers, social organisations, academics and other actors in a synergistic food system. Many local councils accept the PGS as a sufficient guarantee to participate in local markets and other initiatives of direct marketing and short supply chains. PGS members are also active in local public policy, like the Agrarian Council of Valencia.

Challenges: The direct democracy model is difficult to manage and some members recommend prioritising efforts to ensure that some people don't dominate the process. There is also a need for greater diversity and access to markets. Those producers who are closer to the city have more market opportunities than rural producers. Economic sustainability was valued at 1,75/5 on the ESS scale.

Key Facts

Name: **SPG Ecollaures**
Year Est.: **2015**
Country: **Spain**
Inst. Env. Rank: **1**
Suppliers: **20**
Consumers: **15 consumer groups**
Actor Role: **Producer**
Control: **PGS**
Label: **Own brand (SPGE)**
Legal Entity: **association of farmers**
Intermediation: **socio-cultural**
Chain length: **Short**
Digital: **Information**
Traceability: **within the PGS**
SFSC Type: **Farm First**
Vision:

sustainable
local
autonomous
agroecological
biodiverse



“The program " Grown with Care in Bulgaria" has made METRO an intermediary between local farmers and their professional clients in the hotel and catering industry.”

Description: METRO is an international supermarket chain operating in 26 countries around the world. Metro Bulgaria has opened special sections for organic products in its 11 retail outlets in the country. They teamed up with 200 small agricultural producers across the country to sell authentic fruits and vegetables to its professional Hotel, Restaurants and Café (HoReCa) customers. In this project, Metro has become the bridge between the local farmers and their customers. METRO also prepares and helps Bulgarian producers to export, to develop financial support models and to access easier the EU fund programs. METRO helps restaurant owners and professional chefs to improve quality of the food and enrich their menus with new recipes which in turn will help local tourism. In 2017, METRO launched its program **Grown with care in Bulgaria**, which shortens the path of authentic Bulgarian agricultural products from the field to the plate to provide its customers with always fresh and delicious fruits and vegetables grown and delivered by Bulgarian farmers. METRO's partnership with Bulgarian producers guarantees **fair prices** and eliminates resellers, supporting the sustainable economic development of local farming communities.

Quality Assurance: The Grown with care in Bulgaria is a label found on food products, referring to a program of partnership between the Metro supermarket and Bulgarian producers, with support from the Ministry of Agriculture and Plovdiv Institute of Vegetable Crops (IVC). Metro ensures transparency with respect to the resources used and the procurement of products by means of direct relations with their business partners. The label is given to those producers who have signed a contract with Metro. In the contract, the quality requirements are specified, the price and the terms of delivery and payment are stipulated. The company offers a **reliable outlet and a higher price guarantee**, in exchange, the farmer should offer **good quality produce delivered on time**. This on package label therefore refers to responsible production as enabling local producers' direct access to the market, enhancing their production knowledge and meeting the legal quality requirements. One of the other requirements is that the producer can prove the 'authenticity' of the product. Metro works with IVC and farmers to reintroduce into production heirloom and neglected Bulgarian varieties (e.g., Pink Heart tomatoes).

Advantages: Over 150 products with unique flavour qualities produced by small farmers are sold in Metro stores. The success of this initiative (which is still going strong) was a result of purposeful work of employees from Metro, the Ministry of Agriculture, Food and Forestry, as well as representatives of the scientific community. Through this project, Metro is supporting farmers to apply for 2 EU labeled protected geographical indications (GIs): one for a type of bean grown in the Smilyan region, and the other for Reseshki onions – a variety grown only in the Cherven Bryag region.

Challenges: First, there is uncertainty in how to define regional. In Bulgaria, this word usually means Bulgarian, which isn't helpful for local sourcing. Metro has developed a list of criteria that can help to define regional products for the territorial level. Second, the small quantities and the big number of small producers participating in the campaign represent a challenge for Metro's supply chain. Third, the corporate culture clashes with small-scale farmers' ways of working, which is a remnant of their socialist past. Metro sees its role as that of a social and business educator who stimulates corporate relations.

Key Facts

Name: **METRO Bulgaria**
Year Est.: **2017**
Country: **Bulgaria**
Inst. Env. Rank: **8**
Suppliers: **200**
Consumers: **6000 restaurants**
Actor Role: **Intermediary**
Control: **TPC, Internal**
Label: **Grown with care in Bulgaria Organic* (EU, USDA) Eco control, Vegan, Aia Cosmesi, Cruelty Free International, EcoCert, Eco Garantie, GreenPeace Energy**
Legal Entity: **Joint Stock Company**
Intermediation: **Diversified**
Chain length: **Short, Medium, Long**
Digital: **Information**
Traceability: **contracts**
SFSC Type: **Market Quality**
Vision:

partnership
grownwithcare
fairprice
directaccess2market
field2plate

Lessons Learned

Based on the above findings, we can draw the following conclusions and lessons learned.

Qualities

The most important qualities in the SFSCs studied remain qualities based on how food is produced. **Organic** remains dominant in the initiatives' own descriptions of their qualities. Agroecological is a word that is rarely used. In our interviews, only in Spain was this term used voluntarily by the farmers. Other interviewees preferred words that “**go beyond organic**” – like regenerative or permaculture or biodynamic – in order to be more precise about the agronomic practices. In addition, all of the initiatives include social and economic criteria as part of their definitions for how they go beyond organic. Economic qualities refer typically to fairness, decent employment and building local economies. Social qualities are focused on health and communities, but also process-related qualities like participation and responsibility of food chain actors. In this sense, **sustainable** remains a salient quality.

The 2020 Eurobarometer data suggest that taste and origin of the food are among the greatest concerns to Europeans and our data also confirm this conclusion. Taste, fresh and traditional are some of the terms used to describe the flavour profiles sought by European consumers.

Local remains a strong quality that is communicated through informal labels and the variety of interpretations is apparent. What is local, and the geographic origin of products, are important – but this is all defined very locally. What that means is that each initiative has their own interpretation, which is communicated through their own publicity and direct explanations, narratives or stories. For some initiatives, local means from the garden behind the restaurant, while for others, this can mean sourced from within the country. **Seasonal** is another term that appears to be increasing in use to substitute local – particularly for fresh fruits and vegetables and in restaurants. In general, it seems that consumers are not too discerning and that they accept these informal labels based on their trust in the people running the initiatives. We infer this because there are no standardized definitions of local captured by a formal label in our database.

Quality assurance

In terms of **quality assurance**, every initiative has developed some type of internal control that is based on discussion with producers. Depending on who is leading the initiative, this can be inclusive of consumers – or it can be mainly between intermediaries and producers. As reflected in the broader database, there remains a strong reliance on EU Organic certification, but this usually is used when there is no direct purchase from the producer.

Surprisingly, there were very few instances of formalised **participatory guarantee systems (PGS)**. These were most often found in Southern Europe and linked to the agroecology movements. In line with other studies, the democratic processes used by PGS are seen as time consuming, but there are strong incentives to link the PGS with more distant markets. Local public recognition of PGS in Spain, for example, may increase the uptake of this model that could help to expand the geographic reach of some initiatives.

With respect to **labels**, every initiative has invested in developing their own **brand** and this is the dominant label that appears on packages or in the shops. They have invested in gaining consumer trust in the brand, rather than outsourcing this activity to third parties. The visual

aspects of brands and product packaging are gaining more attention, potentially due to the increased use of social media apps like Instagram as part of the marketing strategies of the initiatives.

Business models

This focus on local is important as the majority of the initiatives that we have found operate out of just **one physical location**. This suggests one of two things: 1) these initiatives are purposively created at a small scale in order to keep the local connection and focus on quality in their activities; or 2) their business models do not allow them to scale and reach a broader market for their products. Based on the current evidence, there seems to be a connection between the two options, but it seems that there is a purpose to remaining small-scale in order to be able to stay true to their local and seasonal quality profiles.

We have identified three types of SFSCs that seem to be replicated across Europe. **Farm first** models are driven mostly by producers and the focus is usually on direct sales from farmer to consumer. Integrated models, whereby food production, transformation, cooking and catering are carried out by predominantly producers are becoming more frequent. **Market quality** models, which are driven by intermediaries, are perhaps the most frequent. Here the focus is on the intermediary assuring the quality of the products themselves. It is through this model where we find the majority of small brands emerging and being used to gain consumer loyalty. Finally, **Collective markets** are emerging where producer-intermediaries are increasingly focusing on the socio-cultural and interactive elements of market creations – but they are often using third-party labels. While consumers are present in all of the initiatives studied, there are **very few that are driven by the consumers**. The most frequent consumer-led approach is the movement towards cooperative supermarkets.

Digital trend

We can identify a clear digital trend in these initiatives, as illustrated clearly through the case studies. Perhaps linked to a bias introduced through our data collection methods, or a more general indication of the societal trends in the 21st century, all initiatives have an internet presence and many of them are using social media platforms for three main activities: 1) **name and brand recognition** – through aesthetically pleasing photos of their farms, locations or food. 2) **e-marketing** – often through Facebook groups or through their own websites. The restraints on movement due to COVID-19 has most likely accelerated a trend that already began around 2017. 3) quality management and traceability – this is perhaps the oldest use of digital tools in sustainable food chains where they have been typically used only between businesses. However, we are seeing the emergence for more consumer facing digital technologies that rely upon **consumer feedback** to perform active controls on the claims that companies and intermediaries make.

Weaknesses in the systems

Survey respondents noted that the most important weakness in these systems is the **lack of mechanisms to correct fraud** in production and marketing. The majority of these systems are based on interpersonal trust and basically believing what the producer or intermediary says. It seems that when prices are reasonable, these mechanisms are sufficient. However, when prices are too high or too low compared to market averages for Organic products (which is used as a proxy for quality) then consumers and other intermediaries become suspicious.

Linked to this point is the finding that traceability is not often formalised, and site visits are often used as the main means to ensure transparency of practices. While this method is quite important for the creation of the social relationships that bind consumers and producers together, the logistics of site visits mean that they cannot be the only approach used to ensure transparency of practices. Some initiatives have been substituting this with videos and pictures in their digital media in order to show what is done on the farm, without physically visiting it.

A few respondents explained that current controls can be easily circumvented (even in the certified organic systems). The weak points are the same as for all systems where spaces can allow some to slip in. More flexible, collective models are sought by some initiatives. The idea is that there is a vigilance of the collective (mobile) as opposed to a vigilance of a standard (fixed) system with external controls. But these take time and dedication on the part of all actors to be engaged beyond simple market exchanges.

What we have documented here demonstrates that there is a movement in the direction of more engaged, flexible system, but it is not the majority of cases. There remains a strong role for intermediaries to play in assuring quality between producers and consumers.

With regards to economic sustainability, the results are mixed and difficult to assess based on the data that we collected. The survey responses point to a mediocre performance. In our analysis of the database, we highlighted the importance of EU and other 'project' funds in the support to for the emergence of SFSCs. While public grants, particularly on the research side, are very important for catalysing innovations, this becomes problematic when grant money dries up and continuous business relationships have not been constructed. In our database we clearly have examples of initiatives that have been operating for more than 30 years (more than 100 years in one case). Future research could seek to identify those initiatives that are project-financed from those that have emerged organically from civil society or the private sector. Understanding the types and trajectories of these different initiatives is important for being able to understand the capacity of these initiatives to change scale.

In general, the conclusions from this study suggest that the diversity that we find across these initiatives is a positive element of why they continue to emerge and sustain over time. The flexibility of these initiatives to pick up some standardized elements from one another (e.g., TPC or FACEBOOK) and adapt them to their local situations is perhaps the key ingredient in their success.

Recommendations

Based on the above conclusions, we can make the following recommendations for the Hungarian Case.

- 1) In terms of national institutional contexts, it would be interesting to look at the similarly ranked countries to see how they differ in terms of institutional environments and to share lessons. It would also be important to study, from an institutional perspective, those countries that are ranked higher than Hungary as this can offer ideas and insights for strengthening the institutional support for Hungary.
- 2) Digital tools are extremely important in the cases. The example of Etiquettable is quite interesting for the Hungarian case as it relies upon government data to determine the criteria for food safety, nutrition and environmental impact. They have integrated these evaluation tools into an app that also provides restaurant reviews and recipes. It is free to use and relies upon third-party certifications that are already well known by consumers.
- 3) The urban farm movement offers interesting avenues for creating a vertically integrated initiative. However, the cases suggest that there is a lot of work that needs to be done to create circular economies in urban farms. Thus, it is a concept, typically with a charismatic leader that needs to be developed. The linkages with upscale restaurants seem to be a key element in this movement and this can attract “foodie” tourists.
- 4) Cooperative supermarkets and other models that rely upon volunteer labor in exchange for reduced prices are recently emerging across Europe. These models need to be studied carefully in relation to the needs of the community where they are established. In some lower income communities time is not an abundant resource and alternative methods for inclusion should be explored.
- 5) Participatory guarantee systems are only just emerging within the EU. This is due to the requirements of EU regulations for Organic production. Exploring the recognition of PGS by local and regional authorities may help to support farmers to invest their time in them. PGS have demonstrated their effectiveness in reducing ‘fraud’ or non-compliant practices among farmers because of their strong social control methods.
- 6) The case of METRO Bulgaria is a very interesting example for improving the selection of local and seasonal products in supermarkets. With coordinated support from the Ministries and research centers, the supermarket has built a local sourcing model that reduces imported products and reinforces consumers’ preferences for taste, local and traditional products. The challenge of this case is related to the clashing business cultures between a large corporate structure and small farmers, but their contract system and on time payment seems to be working.

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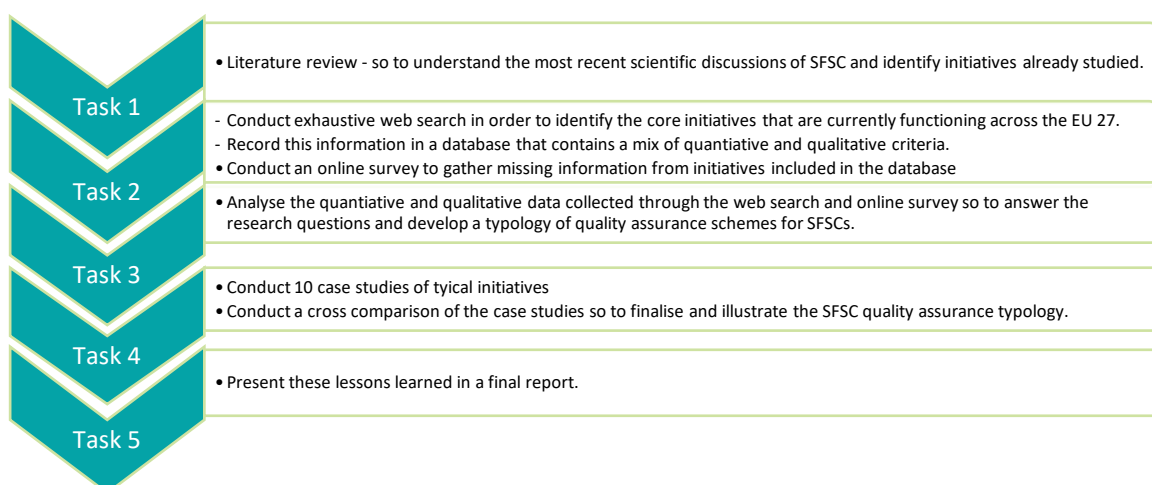
Appendix A: Methodology

In this section we explain the methods used to develop and analyse the data that will be collected in this study. We have developed a research methodology that triangulates data through a systematic literature review, an exhaustive web search of initiative's websites, an online survey, and case studies that will include semi-structured interviews. Qualitative and quantitative analysis was conducted across this data and was used to develop a typology of initiatives and draw lessons learned for the Hungarian situation.

The core research questions that guided this study are:

1. What food qualities are traded in SFSCs?
 - a. How is the food produced?
 - b. Where does it come from?
 - c. What types of markets or supply chains are replicated?
2. What is being assured in terms of quality?
 - a. What quality attributes are hard to interpret/define?
 - b. What proxies are used to measure good quality or sustainability in an accountable way?
 - c. What quality assurance is required by national regulation?
 - d. What quality attributes are the strongest in terms of attracting consumers?
3. How are intermediaries organized when it comes to shortening supply chains?
 - a. Which logistics solutions are cost-efficient for such systems in different stages of What (common) challenges do specific types of actors (small-scale/urban farmers) face?
 - b. What (common) divergent alternatives do specific types of actors (small-scale farmers or enterprises) develop to overcome their challenges?
4. What can we learn from specific cases so to build a successful platform in Hungary?
 - a. How can we communicate challenges & experiences for the Hungarian context?

Figure 1 : Project Tasks



Task 1: Literature review

We used the CorText¹ platform for socio-semantic textual analysis to conduct a robust systematic literature review of the SCOPUS database, which is the most complete bibliographic database for scientific research in the social sciences. We focused on two bodies of literature: 1) SFSCs and alternative agri-food networks in economics and rural sociology; and 2) standards and certification in international relations and political economy. This systematic literature review was carried out following the method previously developed by the LISIS team leader (FAO; Loconto et al., 2019).

We used the following keywords to identify relevant literature in the SCOPUS database:

TITLE-ABS-KEY ("alternative agri-food networks" OR "short food supply chain" OR "circuit court" OR "local food system" OR "quality turn" OR "certification" OR "participatory guarantee systems" OR "participatory certification" OR "farm to fork") AND (LIMIT-TO (SUBJAREA , "SOCI") OR LIMIT-TO (SUBJAREA , "ENVI") OR LIMIT-TO (SUBJAREA , "AGRI")) AND (LIMIT-TO (SUBJAREA , "BUSI") OR LIMIT-TO (SUBJAREA , "ECON") OR LIMIT-TO (SUBJAREA , "ARTS")).

This search resulted in a corpus of 3,533 documents. After eliminating those article that were not in the agriculture, food or environment domain (e.g., teacher certification and education, court certification and interpretation, language certification, vehicle certification, court certifications, healthcare), we were left with a database of 2,397 references. We imported these into the CorText Manager software in order to characterize the content of the database and conduct sociometric analysis. We mapped out the scientific networks to identify saturation and repetitions, as well as present the state of the art on the nature and efficacy of quality assurance in short food supply chains.

¹ <https://www.cortext.net/>

Task 2: Web search, database composition and online survey

In order to capture the landscape of current web search, database composition and the development of an online survey that will facilitate data collection.

Theory-driven parameters for analyzing quality assurance in SFSCs

Based on previous research (Loconto et al., 2018a; Loconto et al., 2018b), we have developed a theory-driven set of parameters that enable us to compare a large number of initiatives. We separate the conceptual elements into four domains that help us to identify actors, devices and processes that are important for ensuring quality in short food supply chains. We thus theoretically-derived the questionnaire used to collect data, we develop our typology based on these four domains and we organised the analysis of our results along these parameters. These four domains were also used to develop the enabling institutional environment for SFSC quality assurance.

Business domain: the roles of different actors

The business domain refers to the trading relationships considered to be in the middle of a supply chain (de Bakker et al., 2019; Reed, 2009; Smith, 2010). The value chain includes all actors and processes that add value from farm to fork (FAO, 2014a). Each role in the value chain – production, collection, aggregation, processing, transportation, retail, food preparation – can be carried out by different types of actors be they public, private or civic. Therefore, we refer to the roles of actors in getting food from the farm to the table. Based on prior research have identified five types of actors in quality assurance aspects of SFSCs: producer, consumer, intermediary, regulator and certifier. We include information about the legal entity of the initiatives, the type of consumers, and their declared core business.

Certification domain: the type of control system

The certification domain is where standards development organisations, certifiers, accreditors and experts interact. It is well studied in terms of the credibility of standards systems and the types of bureaucracies that they put into place to ensure that there are markets for certified products (Loconto, 2017b; Fouilleux and Loconto, 2017; Reinecke, 2010; Reinecke et al., 2012; Cochoy, 2010). Numerous studies have argued that the way in which products, people or processes are audited has differential outcomes for the producers, intermediaries and consumers of the products (Bingen and Busch, 2006; Loconto and Hatanaka, 2018; Loconto, 2017a; Power, 2003). For the purposes of this study, we have sought to describe the control system, identify formal and informal labels, the range of certifications used, laboratory tests, consumer feedback loops and who participates in the certification process.

Public domain: the nature of intermediation

The public domain refers to the diversity of services that are offered by intermediaries or public actors who enable farmers to engage in agroecological or sustainable farming practices and level of engagement in the exchange processes (Loconto et al., 2018b). Recent studies argue that the consumers are increasingly looking for a role for government regulation with regards to sustainable food (Brenton, 2018; Janssen and Hamm, 2014). Previous research identified four types of intermediation activities that could be carried out by public, private or civic actors (Loconto et al., 2018b). These were:

- *Information-rich*, which are characterized by a key intermediary whose role is mainly to share information among market actors, but not actively to organize the market. Direct sales where the intermediary is not necessarily involved is the dominant form.
- *Diversified*, where a multifunctional intermediary provides services that add value to market exchanges and among the market actors but does not run the consumer market. Classic market intermediaries are thus diversifying to offer a range of services such as production and extension, product development, research and consumer recruitment.
- *Interactive* have key intermediaries whose main role is to set up a physical market space where products can be exchanged. Although the intermediary may provide additional services, it is the convening of the market exchange that defines the initiative.
- *Sociocultural*, where multifunctional intermediaries not only provide a range of services (environmental, sociocultural and economic) to both producers and consumers, but are also highly involved in hosting markets. On-farm and specialized shops are most active.

For the purposes of this project, we gathered information about the Agronomic trajectory, Network/actors involved, the length of supply chain, the number of intermediaries, and if they were using digital technologies.

Consumption domain: Articulation of values and product quality

The consumption domain is where consumers, retailers and food catering actors interact. In SFSC, producers are also usually part of these interactions. This area is attracting growing attention as ethical consumption practices are continuing to grow in EU countries (Andorfer and Liebe, 2012; Schenk et al., 2016; Carrington et al., 2020). According to the economics of conventions, market exchange is only possible when there is some agreement (a “convention”) about the “quality” of the products to be traded and methods that enable actors to measure that quality (Boltanski and Thévenot, 2006 [1991]). According to Callon et al. (2002), more than a simple comparison of product characteristics, the process of defining a product is the process of defining its qualities. The concept of quality therefore is the result of a process of qualification; whereby qualities are attributed, stabilized objectified and arranged to a product and these qualities have two principal components: intrinsic and extrinsic. In our cases, actors identified differences between intrinsic qualities (like being agroecological or organic) and extrinsic qualities (like being tasty or the right size). We relied upon the actor’s own definitions to gather information about the qualities of their products, the use of celebrity spokespersons, the specific quality management practices, their visions for the future and prospects for growth and their perception of the economic sustainability of their initiative.

Name	Name of the initiative
Country	Country name
City	City name
GPS	GPS coordinates of HQ
Website	URL
Contact info	Email address
Year founded	‘Age’ the initiative. For how long has the initiative been operating?

Self-description	Summary of what the initiative is/does copied from their website.
Country QA context	Score based on an index we develop
VC Role/title (specific)	<i>i.e.</i> farmer, retailer, restaurant owner, farmer's market coordinator [will develop a way to identify place or organization]
Type of actor	Producer, intermediary, regulator, certifier...
Type of legal entity	No legal entity, Ltd., LLC, PPC, cooperative, employee-owned, etc.
Core business	Main activity of the initiative (<i>i.e.</i> , certifying, farming, retail, food service, etc. – we will create the list of categories..)
Control System	TPC, PGS, SC, B2B [buyer controls the supplier through the use of contracts] – these are the different forms of control within the quality assurance, we will establish the different categories based on our first examples.
Formal label(s)	Name, logo image [formal means that there is a public authority that recognizes the label – this can be recognized through state regulation, public accreditation of third-party labels or the registration of a trademark/brand]
F. label(s) description	Actors' description of what the label stands for
Informal label(s)	Name, image [informal means that there is no public authority that recognizes the label, it is used informally and typically not found on products in formal distribution channels]
I. label(s) description	Actors' description of what the label stands for
Additional certifications	Beyond their core certification, does the initiative use other certifications? [e.g., food safety, organic, fairtrade etc..)
Certified entity	What is certified? [e.g., product, produces, person, organization]
Cost of certification	Who pays, for what service and how much?
Participation	Who participates in the quality assurance process?
Laboratory Tests	Are there any laboratory tests involved (soil quality, MRLs, nutrition, etc?)
Feedback loops	How do consumers provide feedback on quality?
Loopholes	Weaknesses in the model that can lead to cheating?
Agronomic trajectory	Agronomic practices, cropping system, resources used, labor
Network/actors involved	Who are involved in the production, supply and sale?
Length of supply chain	Short, medium, long [based on the actors' descriptions. In the absence of the descriptions, the analyst can assign the length]
Number of intermediaries	Number of intermediaries between producer and final consumer
Qualities	Actors' description of the qualities their products represents
Personification of the product	Is there a spokesperson, mascot, something that is used to create a personal connection for the consumer?

Quality Management practices	From farm to fork traceability processes. How is quality checked? can it be traced? How is it traced (documents, site visits)? What parts of the supply chain are checked?
Vision	What vision of a food future is the being claimed by the authors? [e.g., local, traditional, sustainable, healthy, biodiverse, green...]
Digital tech	Is there an IT component to the system? Y/N What is it, how does it work, what function does it have for quality assurance?
Question parameters...	[we will add these from the online survey]
Number of consumers	With historical data if possible/available – we will create different columns for the different data – or perhaps include the current number and % yearly growth.
Prospects for growth	Based on market size / consumer solvency / production capacity / economies of scale in logistics – or any other limiting factors
Indications of economic sustainability	Three questions related to the economic viability of the initiatives have been adapted from the French Le Labo de l'ESS (social and solidarity economy) self-assessment questionnaire. [https://lelabo-ess.org/testez-le-profil-de-votre-circuit-court.html]

Data collection

The data collection process has followed a systematic approach, which we detail in this section.

1. Units of analysis

To the database, we compiled all initiatives, businesses and organizations that indicate in their self-description one or more features associated with short food supply chains, in the selected European Union countries. These include farms, restaurants, specialty shops, farmers' markets, suppliers, community and agritourism promoters, NGOs, etc., whose products and services reflect such features as linkages with the local gastronomy, for example: local and fresh produce, territorial identity, kilometer zero (0km), from-farm to-table, original flavors/taste, traditional cooking, etc. despite organic and other quality attributes.

2. Search and identification

The search and identification for these consisted of internet searching by keywords attached to the country name, both in English and the country's language, in order to find either official websites of a particular business or a list of places. Online translators like Google Translate and DeepL (www.deepl.com) were used to translate the in-bar English-typed keywords into the language of another country, as well as to translate the information that has been subsequently found, in order to find further options beyond of what is found in English language.

In English	Translated into the country's language(s)
«farmers' markets in Spain»	«mercados de agricultores en España»

«farm-to-table restaurants in France»	«restaurants de la ferme à la table en France»
«basket-system markets in Belgium»	«marchés du panier-système en Belgique» «korf-systeemmarkten in België»
«local gastronomy shops in Germany»	«lokale Gastronomie in Deutschland»
«agrotourism in Italy»	«agriturismo in Italia»
«local food restaurants in Poland»	«lokalne restauracje w Polsce»
«local food shops in Greece»	«Τοπικά καταστήματα τροφίμων στην Ελλάδα»

Table 1. Sample searches in multiple languages despite English through a search engine.

Social media, including map websites, are other viable search tools to find and locate any particular group, marketplace, business, NGO, etc.. Besides connecting with people (among registered users), social media is both effective and strategic tool to communicate news and events, reach customers, recruit members, gain valuable insights, and grow a brand (<https://blog.hootsuite.com/social-media-for-business/>). Therefore, we used Facebook, Google Maps, TripAdvisor, Yelp and Lonely Planet to find and locate more efficiently short food supply chain initiatives, businesses and organizations. We reflect that these tools are quite frequently used for such purposes. In the majority of the cases, it was feasible to find and compile contact informations (phone number, physical and email addresses, etc.), even the links to their official websites. Not all but the ones that provided a description about their initiatives, businesses or organizations, showed detailed and extensive information (even in their reviews) whereas others limit to a short but basic overviews. Whether one or the other, these descriptions at least give an idea about the result – although not always precise.

Along the searching process, and also because of previous research works, we found and hence used specific searching platforms which were exclusively designed to find and contact retailers, farmers, shops, etc.. Also, these are used by those who intend to promote and advertise their businesses along mainstreams for local food chains, community supported agriculture, etc.:

- La Ruche qui dit oui! (European Union): <https://laruchequiditoui.fr/en>

(The Hive that says yes! In English) is an online platform (website and application) founded on the principles of a collaborative economy. Since its beginnings in 2010, it has aimed to promote local agriculture through (online) sales of healthy products under a strong territorial anchorage. This initiative was created to optimize sales in short supply chains, basically, limited to only one intermediary between the producer and consumer: the hive manager (store, seller or promoter). The platform serves as a producer-consumer outreach, as well as a searching tool of the Hives (shops and sales points) able to find on maps in 7 European countries and with option to choose language. All hives locations are indicated and, by clicking on one, it provides information about the store, products and services, including official/social media website, contact details, operational hours, etc..

- Slow Food (Worldwide): <https://www.slowfood.com/>

With over 100,000 affiliated members, Slow Food is an international grassroots organization against fast lifestyle and loss of local food cultures and traditions. Since its foundation in 1989, it has grown into a global movement involving millions of people in around 160 countries, working towards the vision of ensuring that everyone has access to good, clean and fair food (Slow Food's interconnected principles). Approximately, there are 1,500 Slow Food communities around the globe, which are independent projects of local gastronomy and food sovereignty, being supported by any of Slow Food's foundation entities: Foundation for Biodiversity, Terra Madre Foundation, and University of Gastronomic Sciences. One can find Slow Food projects, from restaurants to farmers' markets, by searching on the official website or across social media (e.g. Facebook, Twitter, Instagram...).

- AMAP (France): <http://www.reseau-amap.org/recherche-amap.php>

This searching tool is limited to the French AMAPs (associations for the maintenance of peasant agriculture). The first AMAP was created in 2001. Since then, the number of AMAPs has been increasing exponentially, and present in all regions of France. In 2015, around 2000 AMAPs were found to be registered within the network. The objective of an AMAP is the preservation of the existence and continuity of farms of proximity. They consider themselves as sustainable agriculture, focusing on peasant agriculture under attributes of socially equitable and ecologically sound. These farmers' associations follow a similar model of community supportive agriculture, functioning as well as basket systems in regional-scale ratios.

- Campagna Amica (Italy): <http://campagnaamica.it>

Campagna Amica (Friendly Countryside in Italian) is an Italian foundation which, since 2008, has been carrying out initiatives aimed at the full valorization of Italian agriculture, by highlighting protection of the environment, territory, traditions and culture, health, food security, equity, food access, social aggregation and work. It serves as a facilitator to Italian agriculture in the three main areas of direct sales, tourism, and eco-sustainability, and is a point of reference for anyone interested in the destiny of the environment and the territory, the quality of consumption and the styles of life. Its network is composed of dozens of member organizations and businesses throughout the country, naming farms, farmhouses, farmers' markets, restaurants, urban gardens and buying groups (retailers and suppliers).

- LeCourtCircuit.fr (Northeastern France): <https://lecourtccircuit.fr/index.php>

LeCourtCircuit.fr (The Short Circuit) is an initiative that is keen to invest in peasant agriculture economy within the French region Hauts de France. This project is based on a philosophy of action and of public utility, with the ambition to bring consumers to the adhesion of local and quality agriculture. It consists of online purchasing, connecting consumers with producers through a catalogue (platform) where one can view, sell and buy online. Besides products, sellers publish their sources of production by promoting the farms that supply them, including contact information, business hours and review section. Their conviction consists of "buying from your neighbor is smarter!"

Along the processes of searching and selecting profiles ligated to SFSCs, we discovered additional and existing platforms created for similar purposes. Below a list of additional examples: websites that – despite of aiming to either strengthen small-local producers or bring them closer with consumers – we found along the process and from which we also

compiled relevant profiles. Some of them provide geographic indications (GPS locations) but mostly brief descriptions, contact information and links to (official) websites:

EU:

- SKIN (Short Supply Chain Knowledge and Innovation Network) (EU): <http://www.shortfoodchain.eu/>
- SmartChain Platform (EU): <https://www.smartchain-platform.eu/>
- Ecomap (Germany, Austria & Switzerland) : <https://ecomap.global/>

Per country:

- Czech Republic – Asociace regionálních značek (Association of regional brands): <http://www.regionalni-znacky.cz/>
- Czech Republic – Český Farmář - produkty od farmářů z Vašeho okolí (Czech Farmer – products from the farmers in your neighborhood): <https://www.ceskyfarmar.cz/>
- Czech Republic - Farma na dlani (Farm in the palm of your hand): <https://trziste.farmanadlani.cz/farmar>
- Denmark – Goforlocal: <https://goforlocal.dk/gaardbutikker>
- Estonia - Eesti Toidutee (Estonian Culinary Route): [https://www.toidutee.ee/index.php?id=estonian-cuisine-caterers&cat\[\]=19](https://www.toidutee.ee/index.php?id=estonian-cuisine-caterers&cat[]=19)
- Greece – Openfarm : <https://openfarm.gr/>
- Ireland - NeighbourFood: <https://www.neighbourfood.ie/>
- Ireland - Country Markets Ltd: <http://www.countrymarkets.ie/>
- Ireland - Foodture: Fair Food Map: <https://foodture.ie/>
- Ireland - Georgina Campbell's Ireland: <https://www.ireland-guide.com/>
- Italy - Mercati di Roma (Markets of Rome): <https://www.mercatidiroma.com/>
- Luxembourg - Sou schmaacht Lëtzebuerg (This is how Luxembourg tastes): <https://www.sou-schmaacht-letzebuerg.lu/fr>
- Poland - LokalnyRolnik.pl (LocalFarmer.pl): <https://lokalnyrolnik.pl/>
- Poland - WiemCoJem.pl (I know What I Eat.pl): <http://wiemcojem.pl/>
- Slovakia - Farmička.sk: <https://www.farmicka.sk/>

3. Protocol for selecting and extracting information from the websites

#	PARAMETER	QUESTION & ANSWER SELECTION CRITERIA	COMPULSORY
1-4	name, year*, country, multiple_countries, number_locations, location_1:6)	Name of initiative/business/organization, year of foundation, country location, located in other countries (if more than one), number of locations and GPS coordinates. *If not year shown, answer is 'no_info'.	Y

#	PARAMETER	QUESTION & ANSWER SELECTION CRITERIA	COMPULSORY
5	actor_role	<p>What role does your initiative/business/organization perform in the value chain?</p> <ul style="list-style-type: none"> Choose 1 answer: <ul style="list-style-type: none"> Producer: if found to be limited to production, and not involved in other processes. Intermediary: if found to be involved in sales, trade, supply or promotion a product/service, as long as production is neither mentioned nor involved within the activity. Producer & intermediary: if addressing both producer and intermediary roles. Regulator: if mentioning/showing activities linked to a legal protocol or authorization for product/service control (e.g. inspection, regular checks, etc..). Certifier: if mentioning/showing any activity related to product/service certification. 	Y
6	spec_activity	<p>Specific activity of your initiative/business/organization:</p> <ul style="list-style-type: none"> Fill in blank: what does the initiative/business/organization do, specifically, according to stated information in the official website, and in line with the role above? <ul style="list-style-type: none"> Answer can be more than one term and should be primary activities (e.g. farm and farm shop). For data analysis, must be filled with *** in between, and without spaces (e.g. farm***farm_shop). 	Y
7	description	<p>Brief description of your initiative/business/organization (in less than 250 words):</p> <ul style="list-style-type: none"> Fill in blank: a copied summary and/or selection of fragments of 'Who we are', 'About us', 'The company/farm/team...', 'What we do', etc.. 	Y
8	legal_entity	<p>Type of legal entity:</p> <ul style="list-style-type: none"> Choose 1 answer: 1) Limited liability company (Ltd), 2) Non-limited liability company (LLC), 3) Cooperative, 4) Non-governmental organization (NGO), 5) Ad hoc committee, 6) No legal entity, 7) Other. <ul style="list-style-type: none"> Some websites indicate their type of legal entity, others not. Therefore there are 3 answer considerations: <ol style="list-style-type: none"> If showing/mentioning a legal entity exact/similar as one of the in the multiple choice options, therefore the answer will be the one that matches in exact name and description. If showing/mentioning a legal entity NOT listed in the multiple choice options, therefore the answer is 7), and the next column must provide the exact name of the type of legal entity. If NOT showing/mentioning a legal entity: the answer will be automatically 'unknown', unless if evidence of a corresponding legal entity is found in additional sources. 	Y
8.1	other_entity	<p>Please specify the 'other' type of (legal) entity of your initiative/business/organization:</p> <ul style="list-style-type: none"> See previous variable/parameter (legal_entity): second answer consideration (2.). 	Y

#	PARAMETER	QUESTION & ANSWER SELECTION CRITERIA	COMPULSORY
9	ctrl_system	<p>Which quality assurance system applies to the quality control/supervision of your products and services?</p> <ul style="list-style-type: none"> • <u>Choose 1 or more answers:</u> <ul style="list-style-type: none"> ○ Third party certification (TPC): if indicating a name of a (private) third party certification body and/or the exact term as - or similar to - this control system. ○ Participatory guarantee system (PGS): if mentioning/showing the name of the PGS by which the business is part of, or if indicating exactly this term if no name of the PGS is mentioned/shown. According to IFOAM, there are 11 PGSs in all Europe. ○ Social control: subject to interpretation/perception, unless the term is exactly mentioned. ○ Consumer regulated: subject to interpretation/perception, unless the term is exactly mentioned or if indicating the involvement of consumers (in general or associations) in the control process. ○ Business-to business (B2B): subject to interpretation/perception, unless the term is exactly mentioned or if business names are mentioned and described with descriptions of mutual feedbacks and revisions. ○ Other: if mentioning another but different control system, and subject to interpretation/perception. • If unsure or no relevant information found, the answer would be 'no_info'. 	Y
9.1	other_system	<p>Please specify the 'other' quality assurance system:</p> <ul style="list-style-type: none"> • See last multiple-choice answer (Other) on previous variable/parameter (control_system). 	Y
10	formal_label	<p>Are there any FORMAL labels in your products and services?</p> <ul style="list-style-type: none"> • <u>Choose 1 answer:</u> <ul style="list-style-type: none"> ○ Yes: if a logo is visually shown somewhere on the website, on the displayed products, or in the text. ○ No: if clear and evident that there are no formal labels, although no precise through visual/textual evidence. <ul style="list-style-type: none"> ▪ No_info: if unsure despite that there is neither visual content nor text showing the use of a formal label. 	Y
10.1	formal_label_name	<p>Please mention the name(s) of the FORMAL label(s):</p> <ul style="list-style-type: none"> • <u>Fill in blank:</u> <ul style="list-style-type: none"> ○ For data analysis, two or more single terms must be separated with *** in between, and no spaces but ' _ ' (e.g. Organic***Fair_Trade). 	Y
10.2	formal_label_desc	<p>Please briefly describe what does (each of) the FORMAL label(s) stand(s) for.</p> <ul style="list-style-type: none"> • <u>Fill in blank:</u> <ul style="list-style-type: none"> ○ A copied text of the exact definition about the label stated in the official website, or... ○ if no description is shown/mentioned, a copied/summarized fragment of the logo from its official source. 	Y
11	informal_label	<p>Are there any INFORMAL labels in your products and services?</p> <ul style="list-style-type: none"> • Same criteria as the Formal labels Yes-No question (see formal_label). 	Y
11.1	informal_label_name	<p>Please mention the name(s) of the INFORMAL label(s):</p> <ul style="list-style-type: none"> • Same criteria as the Formal labels names (see formal_label_name). <ul style="list-style-type: none"> ○ Again, for data analysis, two or more single terms must be separated with *** in between, and no spaces but ' _ ' (e.g. Solidarity_economy***Farm_to_fork). 	Y
11.2	informal_label_desc	<p>Please briefly describe what does (each of) the INFORMAL label(s) stand(s) for.</p> <ul style="list-style-type: none"> • Same criteria as the Formal labels description (see formal_label_desc). 	Y

#	PARAMETER	QUESTION & ANSWER SELECTION CRITERIA	COMPULSORY
A	certified_entity	Which of the following is/are certified by the labels you indicated previously? <ul style="list-style-type: none"> • <u>Choose 1 or more answers</u> (whether formal or informal, or both): <ul style="list-style-type: none"> ○ Product: if clearly shown/stated clearly that a product or crop is certified (e.g. label shown on product). ○ Service: if clearly stated in text certification of an operational activity, mostly of intermediary sort (e.g. delivery, inspection, logistics management, etc.). ○ Person: subject to interpretation/perception, for example, a certified profession or specialization (e.g. chef, cook, butcher, logistics coordinator, agronomist, etc.). ○ Initiative, business or organization: if clearly stated in text that the initiative, business or organization is certified (e.g. company X is certified by...). ○ Other: if another characteristic than the above options is certified. • If unsure or no relevant information found, the answer would be 'no_info'. 	Y
A.1	certified_other	Please mention what is/are certified in 'other' by the label(s) you indicated: <ul style="list-style-type: none"> • See previous variable/parameter (certified_entity): last multiple-choice answer 'Other'. 	Y
B	cert_pay	Who pay(s) the certification? <ul style="list-style-type: none"> • <u>Fill in blank.</u> • Very unlikely to find in official websites: <ul style="list-style-type: none"> ○ If not find, answer is 'no_info'. 	N
C	service_paid	For what services and/or processes of certification are paid? <ul style="list-style-type: none"> • <u>Fill in blank.</u> • Very unlikely to find in official websites: <ul style="list-style-type: none"> ○ If noy found, answer is 'no_info'. 	N
D	amount	How much (approximately) did/does cost the certification (in Euros)? <ul style="list-style-type: none"> • <u>Fill in blank:</u> numeric value. • Very unlikely to find in official websites: <ul style="list-style-type: none"> ○ If noy found, answer is 'no_info'. 	N
12	participation	Who participate(s) in the quality assurance process? <ul style="list-style-type: none"> • <u>Choose 1 or more answers:</u> producers, retailers, consumers, private certifiers, public authorities and other. <ul style="list-style-type: none"> ○ Choosing the adequate option(s) should be based on evidence and clarity from the official website, despite of perceptions on the information provided. ○ If unsure or not clear about answering, then answer should be 'no_info'. 	Y
12.1	other_participation	Please specify the 'other' quality assurance participant(s):	Y
13	lab_test	Are there any laboratory tests involved in the quality assurance of your products and services? <ul style="list-style-type: none"> • <u>Choose 1 answer:</u> <ul style="list-style-type: none"> ○ Yes: if found clear evidence on text about activities carrying out tests on a product, facility, field, etc.. (e.g. soil, residue, chemical content, environmental impact assessments, etc.). ○ No: unable to answer. Even not shown/mentioned in official websites, participants choose this option when they know for sure – and invisibly true – that there is no lab test within or around their (specific) activities. <ul style="list-style-type: none"> ▪ If unsure of this option, the answer should be 'no_info'. ○ Do not know: unable to answer. Even not shown/mentioned in official websites, participants choose this option when they are unsure – or simply do not know – that there are/were lab tests during, before or after their (specific) activities. <ul style="list-style-type: none"> ▪ If unsure of this option, the answer should be 'no_info'. 	Y

#	PARAMETER	QUESTION & ANSWER SELECTION CRITERIA	COMPULSORY
13.1	tested	<p>Please mention what is tested:</p> <ul style="list-style-type: none"> • <u>Fill in blank:</u> <ul style="list-style-type: none"> ○ Fragment selections of descriptions related to lab/field testes mentioned. ○ For data analysis, must be filled with *** in between, and no spaces (e.g. soil***field_performance). 	Y
14	consumer_quality_desc	<p>(If applicable) could you describe how do consumers provide feedback on the quality of your products and services?</p> <ul style="list-style-type: none"> • <u>Fill in blank:</u> <ul style="list-style-type: none"> ○ If perceived, the answer must be then based on textual evidence: a statement or textual fragment in which describes an activity of consumer involvement (e.g. counsel meetings, surveys, producer-consumer interactions, etc.). 	N
15	weakness	<p>Are there any weaknesses in the model of your initiative / business / organization that can lead to cheating?</p> <ul style="list-style-type: none"> • <u>Choose 1 answer:</u> <ul style="list-style-type: none"> ○ Yes: subject to interpretation/perception. If found or perceived a weakness. ○ No: unable to answer. Even not shown/mentioned in official websites, participants choose this option when they know for sure – and invisibly true – that there is a weakness. <ul style="list-style-type: none"> ▪ If unsure of this option, the answer should be 'no_info'. ○ Unable to answer: unable to answer. Even not shown/mentioned in official websites, participants choose this option when they are unsure – or simply do not know – that there is a weakness. <ul style="list-style-type: none"> ▪ If unsure of this option, the answer should be 'no_info'. 	Y
15.1	weakness_info	<p>Please mention and describe the weaknesses:</p> <ul style="list-style-type: none"> • <u>Fill in blank:</u> <ul style="list-style-type: none"> ○ Fragment selections of text detailing the perceived weakness. <ul style="list-style-type: none"> ▪ E.g. "limited stall number and extensive waiting list of new vendors art a farmers' market". 	Y
16	agronomic	<p>(If applicable) could you mention and briefly describe the agronomic practices that are performed in the production process?</p> <ul style="list-style-type: none"> • <u>Fill in blank:</u> <ul style="list-style-type: none"> ○ Fragment selections of texts indicating agronomic practices such as farming methods, cropping techniques, cultivation, etc.). 	N
17	production	<p>(If applicable) could you mention who are involved in the PRODUCTION?</p> <ul style="list-style-type: none"> • <u>Fill in blank:</u> subject to perception and textual evidence indicating who is/are in charge of the production process. 	N
18	supply	<p>(If applicable) could you mention who are involved in the SUPPLY?</p> <ul style="list-style-type: none"> • <u>Fill in blank:</u> subject to perception and textual evidence indicating who is/are in charge of the supply process. 	N
19	sale	<p>(If applicable) could you mention who are involved in the SALE?</p> <ul style="list-style-type: none"> • <u>Fill in blank:</u> subject to perception and textual evidence indicating who is/are in charge of the sales. 	N

#	PARAMETER	QUESTION & ANSWER SELECTION CRITERIA	COMPULSORY
20	chain_length	<p>How do you consider the length of the supply chain by which the products of your initiative / business / organization travel across?</p> <ul style="list-style-type: none"> • <u>Choose 1 answer:</u> <ul style="list-style-type: none"> ○ Short: unable to answer unless it is clearly stated on text using the exact terms ('short chain'). ○ Medium: unable to answer unless it is clearly stated on text using the exact terms ('medium chain'). ○ Long: unable to answer unless it is clearly stated on text using the exact terms ('long chain'). • If unsure of choosing one of the above, the answer is therefore 'no_info'. 	Y
21	intermediary_number	<p>(Approximately) how many intermediaries are between the producer and the final consumer of your products/services?</p> <ul style="list-style-type: none"> • <u>Fill in blank:</u> numeric value. <ul style="list-style-type: none"> ○ If not indicated on the website – regardless of the previous answer (short, medium, long or no_info) – the answer is N/A. 	Y
22	pers_connection	<p>Is there a spokesperson, mascot, or something that is used to create a personal connection with consumers?</p> <ul style="list-style-type: none"> • <u>Choose 1 answer:</u> <ul style="list-style-type: none"> ○ Yes: unable to answer unless a figure is found – or perceived – in promoting a connection with customers/consumers. Even not shown/mentioned in official websites, participants choose this option when they know what is causing a such connection. <ul style="list-style-type: none"> ▪ If unsure of this option, the answer should be 'No_info'. ○ No: unable to answer although there is no visual/textual evidence on the website. <ul style="list-style-type: none"> ▪ If unsure of this option, the answer should be 'No_info'. 	Y
22.1	character	<p>Please mention what is used to create such connection with consumers:</p> <ul style="list-style-type: none"> • <u>Fill in blank:</u> <ul style="list-style-type: none"> ○ (If the chosen answer was Yes) a brief description about the perception/evidence of a personal connection with consumers/customers. 	Y
23	FTF_quality_check	<p>(If known) from 'farm-to-fork' traceability processes, how is quality checked?</p> <ul style="list-style-type: none"> • <u>Fill in blank:</u> <ul style="list-style-type: none"> ○ Answer is possible if in the text is addressed 'farm-to-fork' and activities for its traceability. 	N
24	FTF_traceability	<p>Can be traced the 'farm-to-fork' by your initiative/business/organization?</p> <ul style="list-style-type: none"> • <u>Choose 1 answer:</u> <ul style="list-style-type: none"> ○ Yes: unable to answer unless it is specifically advertised on the website. ○ No: unable to answer unless it is clearly stated on the website. ○ Do not know: unable to answer. • If unsure of choosing one of the above, the answer is therefore 'No_info'. 	Y
24.1	traced_yes	<p>How is it traced?</p> <ul style="list-style-type: none"> • <u>Fill in blank:</u> <ul style="list-style-type: none"> ○ (If the chosen answer was Yes) a brief description about the evidence of 'farm-to-fork' traceability. 	Y
24.1	traced_no	<p>Why cannot be traced?</p> <ul style="list-style-type: none"> • <u>Fill in blank:</u> <ul style="list-style-type: none"> ○ (If the chosen answer was No) a brief description about the evidence of 'farm-to-fork' intrackability. 	Y
25	chain_parts_checked	<p>(If known) what parts of the supply chain are checked?</p> <ul style="list-style-type: none"> • <u>Fill in blank:</u> <ul style="list-style-type: none"> ○ Answer is possible if shown/mentioned the parts of the chain that are checked. 	N

#	PARAMETER	QUESTION & ANSWER SELECTION CRITERIA	COMPULSORY
26	vision	<p>What are the top 5 keywords or central principles that best describe the mission statement/philosophy of your initiative/business/organization?</p> <ul style="list-style-type: none"> Fill in blank: <ul style="list-style-type: none"> The way to answer this consists in 2 ways: <ol style="list-style-type: none"> Addressing the principles/values of the initiative/business/organization. Analyze carefully activities, mission, vision and goals, and then select the top 5 highlights (keywords). 	Y
27	IT_digital	<p>Is there a digital-IT component to the system?</p> <ul style="list-style-type: none"> Choose 1 answer: <ul style="list-style-type: none"> Yes: answer based on observation. if found characteristics within the website in match with the examples below the question: product catalogue, link to an application or platform, product catalogue, e-shop, link to the social media webpage, newsletter, etc.). No: answer based on observation. if none of the above characteristics has been found. 	Y
27.1	IT_digital_work	<p>How does that digital-IT component work?</p> <ul style="list-style-type: none"> Fill in blank: <ul style="list-style-type: none"> (If the chosen answer was Yes) a brief and simple description about how (each of) the components work. <ul style="list-style-type: none"> If unsure, it can be the same as the answer for the previous question (same and exact words). 	Y
27.2	IT_digital_quality	<p>What function(s) does that component have for the quality assurance?</p> <ul style="list-style-type: none"> Fill in blank: <ul style="list-style-type: none"> unable to answer unless it is specifically advertised on the website. <ul style="list-style-type: none"> If no answer, leave in blank. 	N
28	consumer_client	<p>How do you categorize your consumers/clients?</p> <ul style="list-style-type: none"> Choose 1 answer: 1) highly frequented, 2) loyal/members, 3) regular, 4) occasional/temporal, 5) low frequented, 6) do not know, 7) unable to answer. <ul style="list-style-type: none"> unable to answer unless it is specifically stated on the website (with exact terms). <ul style="list-style-type: none"> If no matching option found: no_info. 	Y
29	monthly_sale	<p>Do you have a estimation of the average rate of your monthly sales?</p> <ul style="list-style-type: none"> Choose 1 answer: <ul style="list-style-type: none"> Yes: unable to answer unless it is established in the website. No: unable to answer although not established in the website. Unable to answer: unable to answer for not knowing any consent. If unsure of choosing one of the above, the answer is therefore 'No_info'. 	Y
29.1	monthly_sale_amount	<p>Could you please provide the estimated sales average (euros/month)?</p> <ul style="list-style-type: none"> Fill in blank: numeric value. <ul style="list-style-type: none"> This answer is possible if an estimated sales average is provided in the website, and thus the previous answer was 'Yes'. 	Y

Questions 30-34 (growth prospects and economic sustainability performance): unable to answer, only by participants. Hence cells remain blank.

4. Pre-data analysis: contacting and surveying

Prior to the following step (data collection), throughout the search and identification processes, involved the compilation of all units' contact information as follows:

Name of the initiative / business / organization	Country	Official website	Facebook website	email	Contact website (if available)	Secondary/additional websites
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Table 2. Header parameters (columns) of the database pertaining contact information of every unit.

For when it comes to the data collection, first, invitations for participation were conducted through contacting all saved initiatives, businesses and organization with the above format. They were contacted by email primarily. That is, a pre-written message sent to each one of them, and in the language of their respective country, explaining: objective of the study, the reason why it was selected, terms and conditions, instructions and contact information for in case of questions or concerns. Within the message, a link to the survey is to be included, which has been created with Kobo Toolbox: specialized software tool for data management and analysis.

Invitation message draft (in English) to participate in the study

To <<Name of initiative / business / organization>>:

Dear Sir/Madam,

I hope you are all right in these times of pandemia.

Hereby, we would like to invite you to participate in a survey for a study aimed at analysing data on quality assurance and transparency systems used in **short food supply chains in the European Union**. We consider that <<Name of initiative / business / organization>> is relevant to this topic.

The study is carried out by a group of researchers from the Interdisciplinary Laboratory of Science, Innovation and Society (LISIS, www.umr-lisis.fr) (CNRS, INRAE and Gustave Eiffel University), and by AgriKulti (<https://agrikulti.hu/>), commissioned by the Hungarian Ministry of Agriculture.

Your participation is voluntary and without compensation. It will only consist of answering a survey. Any information you provide will be confidential, and will not be shared with any third party. Once the study has been concluded, all information collected from you will be deleted from all storage devices of the research team (LISIS). After the conclusion of the study, you may contact LISIS at allison-marie.loconto@inrae.fr and request deletion of your personal data as per GDPR provisions. For more information on your rights according to the GDPR please visit <https://gdpr.eu/>.

The survey consists a total of 34 questions (plus a few sub-sequent questions) about the profile of your <<Name of initiative / business /organization>> in regards to quality assurance system, transparency, management, infrastructure, stakeholder interactions, and economic sustainability performance.

The estimated time for completing this survey is **20 minutes**.

To answer the survey, click on this link: <https://ee.humanitarianresponse.info/vVgcxBXu>

NOTE: the default language of the survey is in English. If you want to change it into <<language>>, the following image shows the option (red square):

Please read each question carefully and follow the instructions on each page. Your contribution will be highly appreciated.

If you have any questions or concerns, feel free to contact me by replying this email.

We will appreciate your consideration

Best regards,

The survey (**Appendix B**) consists a total of 34 questions (plus a few sub-sequent questions) about the profile of the initiative, business or organization with regards to the quality assurance system, transparency, stakeholder interactions and economic sustainability performance. It was structurally designed to collect information in respect to the parameters indicated in the **Technical Annex** of the Service Contract (page 7) between the University Gustave Eiffel and Agri-Kulti.

Once the survey was completed and submitted, we were able to trace the number of respondents, including name and inputs in the Kobo Toolbox dashboard. Whether full participation rate or not, still with the program, we were able to create summary reports with graphs and tables; visualize and disaggregate (collected) data on a map; and export the data in supported formats (Excel, CSV, KML, SPSS...). These then enabled us to answer the 12 research questions after the data analysis (noted at the beginning of this Appendix).

Comprehensive Data analysis

We conducted quantitative and qualitative analysis of our interview data using CorText, NVivo and IRaMuTeQ software packages. These enable qualitative analysis of texts based on algorithms that find statistically significant relationships between words within a linguistic logic of a written text (e.g., co-occurrences). Based on our conceptual framework that focuses on understanding the organization, trust and openness of the SFSC initiatives, we conducted thematic coding of the qualitative data in order to respond to our research questions. We will also link the online survey responses (<https://ee.humanitarianresponse.info/x/vVgcxBXu>) from the to the initiatives' data to see if there are any trends between our data analysis parameters.

The two databases that we used are included as **Appendices C and D** and are the excel files that contain the data and our analyses.

Table A2. List of the 71 profiles from which data was sourced either by surveys (S) or website information extractions (W), indicating country of location, exact name of the unit, supply chain role (P: producer, I: intermediary, PI: producer-intermediary, R: regulator, CI: certifier), and specific activities of each one.

country	source	name	role	activities
Austria	S	ARGE Biobauernmarkt	PI	farmers market
Austria	W	Lieber Ohne : bio, regional & unverpackt	I	grocery shop, kitchen
Belgium	W	BEES Coop	I	cooperative supermarket
Belgium	S	Boerenmarkt Sint Amandsberg	R	farmers market
Belgium	S	CSA Kraakvers.bio	PI	organic farm, community outreach, market 75rganizer, activism
Belgium	S	Kabas Verpakkingsvrij BV	I	merchant, grocery shop
Belgium	S	Mouvement d'Action Paysanne (MAP)	P	agriculture training, education
Belgium	W	Le Fraysse	I	grocery shop, retailer of producer cooperative
Belgium	S	Voedselteams vzw	I	start up promoter
Bulgaria	W	Farmhopping	I	restaurant, e-shop, delivery
Bulgaria	W	My Farm – Near you	I	e-shop, delivery
Bulgaria	W	METRO Bulgaria	I	wholesale retailer
Croatia	W	Fino.hr	I	grocery shop, e-shop
Croatia	W	Opg Mataga Tomislav	PI	farm, warehouse, supplier
Croatia	S	Public institution for coordination and development of Split-Dalmatia County	R	public administration supporting business development

country	source	name	role	activities
Cyprus	W	Blue Island	PI	fish shop, wholesale supply, open sea fish farm, fish hatchery
Cyprus	W	Riverland Bio Farm	P	dairy farm, agrotourism
Czech Republic	W	Augustine Restaurant	I	restaurant
Czech Republic	W	Farmbox	I	delivery, food pantry, e-shop
Czech Republic	W	Medovinárna	I	speciality shop, bar, e-shop
Denmark	W	Skifteker Økologi	P	farm, warehouse
Denmark	W	Amass Restaurant	PI	restaurant, garden, urban farm
Estonia	W	Nopri	P	dairy farm, farm shop
Finland	W	Kaupunkilaisten oma pelto	P	CSA, farm
Finland	W	Lahden Kauppahalli	I	market, shop, brand
France	S	BIO LOIRE OCEAN	PI	producer association
France	S	Etiquetable	C	responsible consumption referrer
France	S	SCOP J DUBOIS Horticulteur	PI	flower producer
France, Belgium	S	Nature & Progrès	C	participatory guarantee system, promoter
France, Portugal, Spain	S	Demain la Terre	P	fresh fruit vegetable production, fruit vegetable processor
Germany	S	Bio Lieferservice	I	organic vegetable supplier
Germany	W	Himmel & Erde	PI	farm shop, farm
Greece	W	AgrecoFarm	PI	estate
Greece	W	Grizo & Prasino Organic Herbs	P	herbal garden, e-shop
Greece	S	Natuevo	P	farm, cultivation, processing, wholesaler
Greece	W	Apo Kinou	PI	farm, education, school, community outreach, workshop, collective cooking, e-shop, solidarity trade
Ireland	W	Circa	I	restaurant
Ireland	W	Small Change Wholefoods Store	I	wholefood store, juice bar
Italy	S	Irpinia Mood	I	speciality shop, promoter, community outreach
Italy	W	La Galaverna	P	pastry
Italy	S	Le Zolle	I	dealer
Latvia	W	Obelisk Farm	P	farm, farm shop, educational site, e-shop, training
Latvia	W	Brokolis Farm	I	grocery shop, e-shop
Lithuania	W	Mobilieji ūkininkų turgeliai	I	farmers market, mobile shops, retailer
Luxembourg	W	Co-labor s.c.	PI	grocery shop, weekly farmers market
Luxembourg	S	TERRA S.C.	P	vegetable producer, CSA
Malta	W	Vincent's Eco Farm	PI	estate, farm shop, workshop
Netherlands	W	Biologische Noordermarkt Amsterdam	I	farmers market
Netherlands	S	De Nieuwe Ronde	P	self harvesting farm
Netherlands	S	De Stadsgroenteboer	P	CSA
Netherlands	S	Groentekwekerij De Nieuwe Ronde	P	organic farm, self harvesting farm
Netherlands	S	Ommelander Markt	I	farmers market
Netherlands	S	Roots, Rice and Beans	P	farm, supplier
Poland	W	Odrolnika.pl	I	outsourcing delivery, e-shop
Poland	W	Pora na pola	I	outsourcing delivery, e-shop
Portugal	W	Open – Brasserie Mediterrânica	I	restaurant
Portugal	W	Montado do Freixo do Meio	PI	farm, farm shop, CSA, rural settlement
Romania	W	All Farm	I	e-shop, delivery
Romania	W	MAIZE Farm to Table	I	restaurant
Slovakia	W	EKO farma Važec	P	dairy farm
Slovakia	W	NÁŠ DVOR	I	grocery shop, e-shop
Slovenia	W	Jarina	I	e-shop, counseling
Slovenia	W	Hiša Franko	I	restaurant, online wine shop
Spain	W	Asociación Cooperativa Agroecológica "La Acequia" Córdoba	PI	farm, social movement, delivery
Spain	S	GERMINAL, SCCL	I	consumer cooperative

country	source	name	role	activities
Spain	S	La Ortiga, Cooperativa de Consumo Ecológico	I	ecological specialized store
Spain	S	Mercado de alimento labrego de Teo nos Tilos	PI	producer, promoter, distributor
Spain	S	Molí de Baix	P	surplus sale, self sufficiency
Sweden	W	Ängavallen	PI	farm, farm shop, hotel, restaurant, courtyard
Sweden	S	Mossagården Eko AB	PI	farm, retailer, restaurant, speciality shop, supplier, community outreach, promoter
Sweden	W	Los Perros Urban Farming	PI	farm, farm shop, delivery, restaurant

Table A3. Summary of the EU countries based the 71 profiles, indicating per country and overall total quantities of data entry linked to source of data (S: survey, W: website), supply chain role (P: producer, I: intermediary, PI: producer-intermediary, R: regulator, CI: certifier), and legal entity (LC: limited liability company, NLC: non-limited liability company, CP: cooperative, NGO: non-governmental organization, AHC: ad-hoc committee, NL: no legal entity, O: other, N/A: unknown).

Country	Total	source		supplu chain role					legal entity							
		S	W	P	I	PI	R	C	LC	NLC	CP	NGO	AHC	NL	O	N/A
Austria	2	1	1		1	1									1	1
Belgium	7	5	2	1	4	1	1		2		1	1			3	
Bulgaria	3		3		3				2						1	
Croatia	3	1	2		1	1	1		1						2	
Cyprus	2		2	1		1									1	1
Czech Republic	3		3		3										1	2
Denmark	2		2	1		1			2							
Estonia	1		1	1												1
Finland	2		2	1	1						1				1	
France	3	3				2		1			1			1	1	
Germany	2	1	1		1	1									1	1
Greece	4	1	3	2		2					1				1	2
Ireland	2		2		2											2
Italy	3	2	1	1	2				2							1
Latvia	2		2	1	1										1	1
Lithuania	1		1		1						1					
Portugal	2	1	1	1		1					2					
Malta	1		1			1										1
Netherlands	6	5	1	4	2										5	1
Poland	2		2		2										1	1
Portugal	2		2		1	1									1	1
Romania	2		2		2				1							1
Slovakia	2		2	1	1						1					1
Slovenia	2		2		2						1					1
Spain	5	4	1	1	2	2					3			2		
Sweden	3	1	2			3			1	1						1
Multiple countries	2	2		1				1				1			1	
TOTAL	71	27	44	17	32	18	2	2	11	1	12	2	0	3	22	20

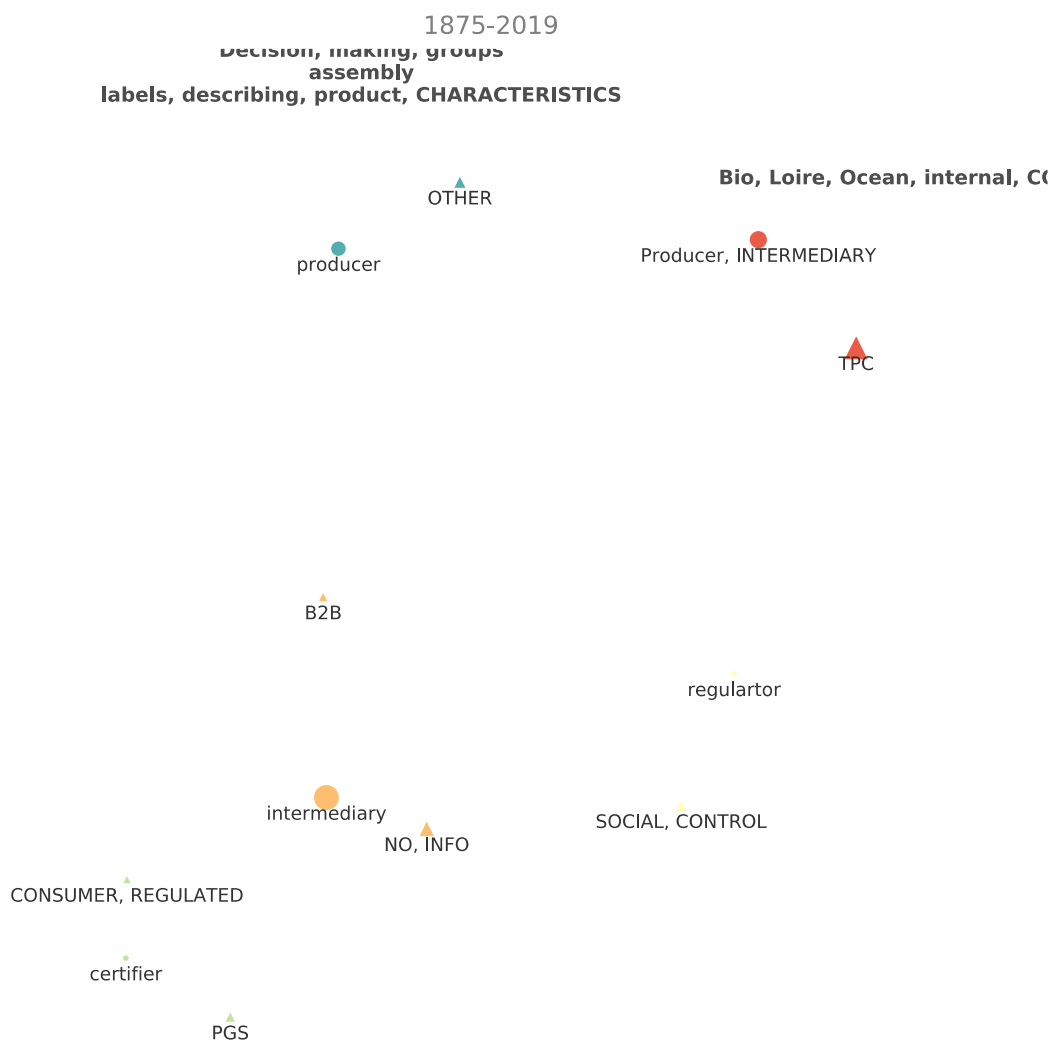
Task 3: Typology of quality assurance schemes

Based on the analysis of the database, a typology of quality assurance schemes used in SFSCs was developed. This typology is based on a mix of process dimensions and of situational dimensions. For each type of quality assurance, enabling and limiting factors will be discussed. The factors that enable SFSCs to inspire trust and openness between producers and consumers will be specifically highlighted. This task contributes to the characterisation work conducted in the case studies and will be presented in the final report.

This appendix consists of the social network maps that were used to develop the SFSC quality typology.

Control System

Network relationships between actor roles and control system variables. Clusters include information about the “other” control system category.



Legal entities

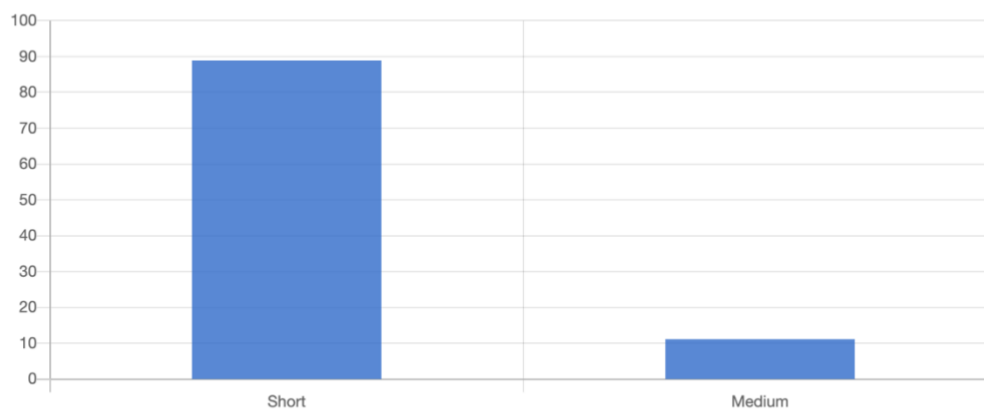
Network relationships between actor roles and legal entities. Clusters include information about the “other” legal entity category.



Length of chain

20. How do you consider the length of the supply chain by which the products of your initiative / business / organization travel across? ...

TYPE: "SELECT_ONE". 27 out of 27 respondents answered this question. (0 were without data.)

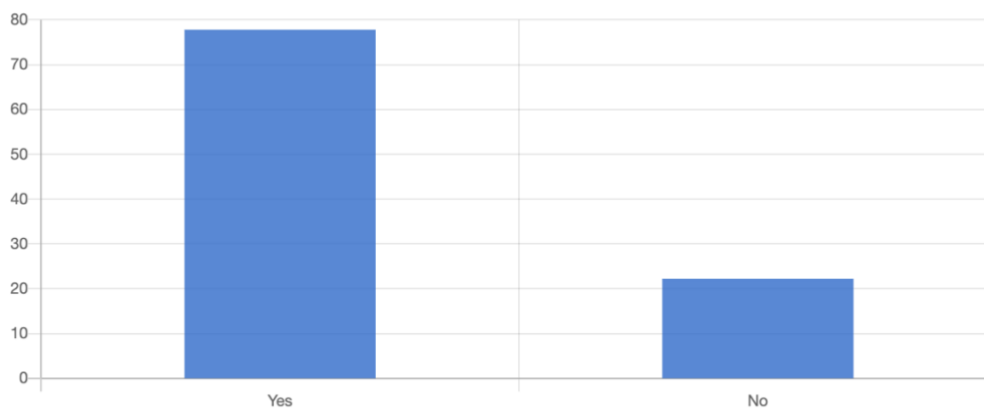


Value	Frequency	Percentage
Short	24	88.89
Medium	3	11.11

Digital tool use

27. Is there a digital-IT component to the system? ...

TYPE: "SELECT_ONE". 27 out of 27 respondents answered this question. (0 were without data.)



Value	Frequency	Percentage
Yes	21	77.78
No	6	22.22

Network relationships between actor roles and digital tools. Clusters include the responses to the question “What function(s) does that component have for the quality assurance?”

1875-2019

record keeping for the harvest and composition of the CSA boxes.
information. producer
nothing

NO

Producer, INTERMEDIARY

regularator

YES

certifier

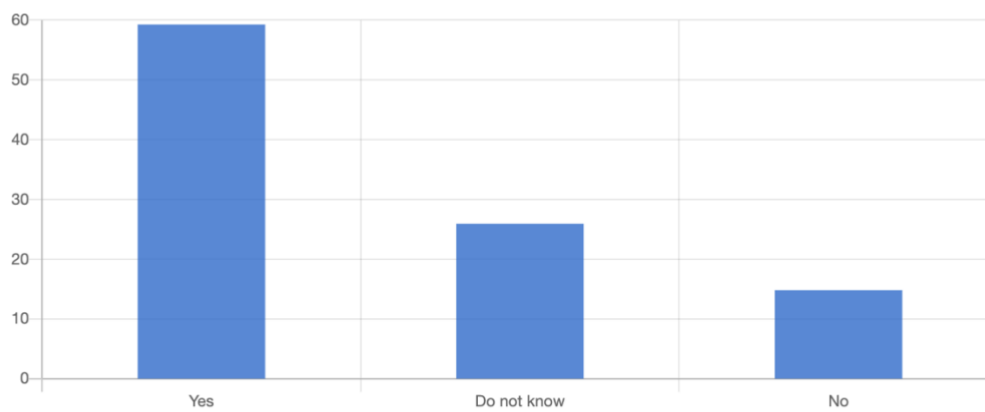
intermediary

producer and vendor backgrounds and profiles, and food recipees.
traceability and management.
product list, description of their components, and possibility of placing orders.

Traceability

24. Can be traced the 'farm-to-fork' by your initiative / business / organization? ...

TYPE: "SELECT_ONE". 27 out of 27 respondents answered this question. (0 were without data.)



Value	Frequency	Percentage
Yes	16	59.26
Do not know	7	25.93
No	4	14.81

Traceability

Network relationships between actor roles and how quality is traced.

1875-2019

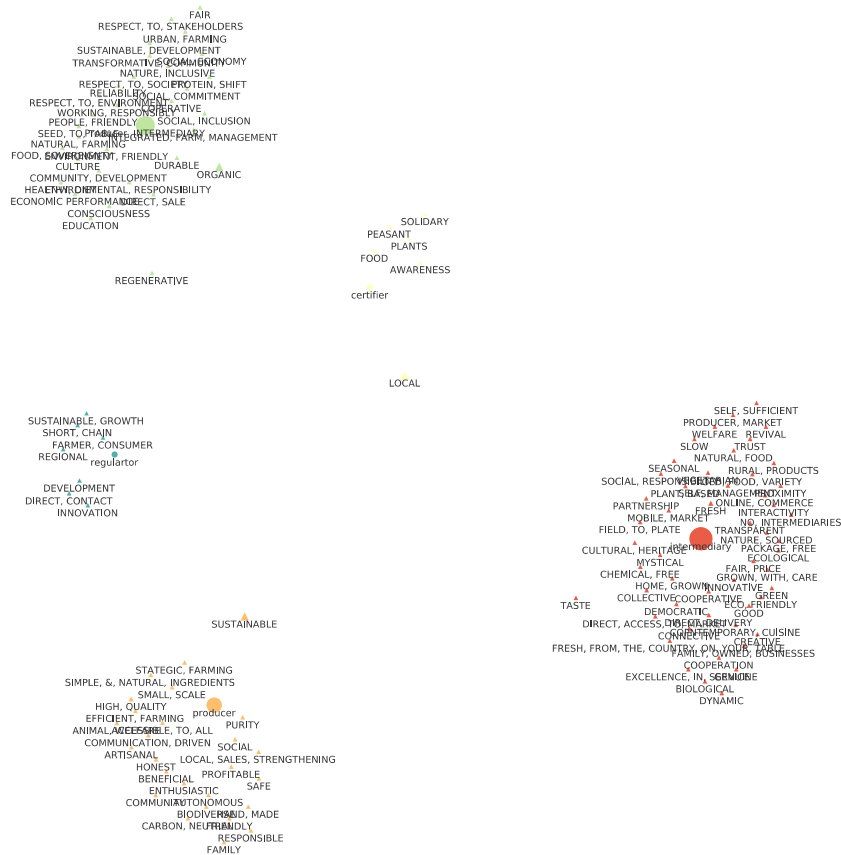


Vision of quality

Network relationships between actor roles and the responses to the question:

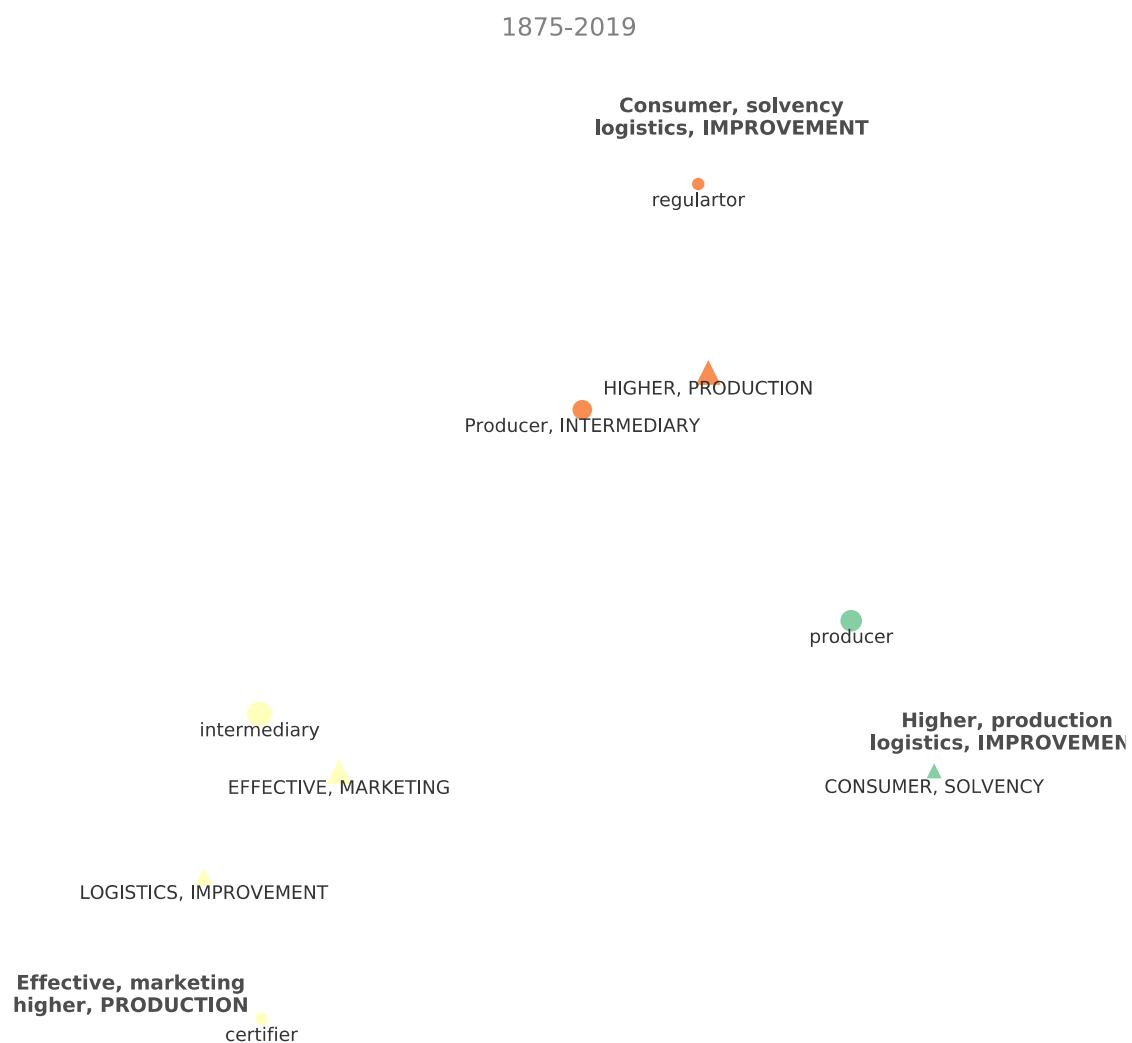
“What are the top 5 keywords or central principles that best describe the mission statement/philosophy of your initiative/business/organization?”

1875-2019



Growth prospects

Network relationships between actor roles and the first priority for growth for the initiative.



Task 4: Typical case studies

We adopted a “multiple-case design” (Yin, 1984) based on a method developed by the lead author in the Res-AGorA and Innovative Markets projects (Lindner et al., 2016; FAO, 2016). This method consists of conducting case studies that collect qualitative and quantitative data on processes, rules and organizational practices that can be compared across the cases.

Based on the identification of patterns and outliers in the initiative database, we purposively selected (Patton, 1990) 10 different cases that enable us to identify commonalities across contextual differences and to represent some of the key characteristics of the quality assurance practices found in the database. We specifically exemplify the typology developed in Task 3 so to enable us to better understand typical challenges and mechanisms that are replicable.

Guide for Interviews with actors for the 10 Cases:

- 1) Before the interview, ask them to fill in the KOBO Toolbox questionnaire, so that we will have the more detailed information about their initiative and can focus the interview on exploring the challenges.

Questions for qualitative interviews for the 10 case studies:

1. How big is the initiative?
 - a. We can work on trying to figure out how to get GPS mapping of the value chains – what are the distances between the location of the producers and the location of the consumers.
 - b. At what rate this coverage has changed since the beginning – (if at all)?
2. In your own words, how do you define ‘agroecology’
3. In your own words, what do you think is a ‘sustainable food system’?
4. What challenges did you face in the beginning of your initiative and how did you overcome those along the process?
 - a. Has anything significantly changed/deviated from the original idea?
5. What qualities do you guarantee?
 - a. If there is a certificate of guarantee that endorses your activity/product? under what regime or criteria are certified and/or accredited? and by which organizations?
 - b. How does your quality guarantee system work?
 - c. What quality attributes does this/these label(s) guarantee?
6. How does your initiative organize its market-based interactions actions between consumers and producers?
 - a. What advertising / marketing interfaces, methods, tools do you use?
 - b. What are the main keywords/messages used?
 - c. Has this changed significantly since the beginning of your initiative?
7. Do you have any non market-based interactions?
 - a. What are these and what purpose do they serve?
8. How do you imagine the next 5-10 years of your initiative?
 - a. What challenges that are on the horizon?
 - b. What changes would you like to make? Why?

9. How would you rank you *own* sustainability (economic, environmental, and social) on a scale of 1-5 with 5 being the most sustainable?

10 case studies representing different types of intermediated short chains

Name	Country	Type	Website	Interview	Additional Sources
Amass Restaurant	Denmark	Restaurant	https://amassrestaurant.com/	Website Instagram TripAdvisor YouTube	https://www.findsmiley.dk/Sider/KontrolRapport.aspx?Virk1841022 https://www.tripadvisor.com/Restaurant_Review-g189541-d4552991-Reviews-Amass-Copenhagen_Zealand.html?m=19905 https://youtu.be/ji9BfPZBeqA https://youtu.be/52iaF7DUCUc https://youtu.be/x2Cr7kRFdvM https://youtu.be/U06Yty_wwgQ https://youtu.be/G8Cnd_INHeM https://twitter.com/amassrestaurant
Apo Kinou	Greece	Cooperative processor (whole chain)	https://www.apokino.gr/en/	Farm visit in 2019 Website	https://youtu.be/TugwEFUxV3g https://www.facebook.com/rovithaki https://www.facebook.com/apo.kinou https://www.instagram.com/apo_kinou_coop/ https://youtu.be/-dXxo7allik
BEES Coop	Belgium	Cooperative supermarket	http://bees-coop.be/	Website Internal documents	https://www.facebook.com/BEEScoop1030/ http://falcoop.ulb.be/

					https://tchak.be/index.php/2020/12/28/bees-coop-magasin-bio-clients-proprietaires/ https://youtu.be/9sVCBZliWOM https://youtu.be/ez_xPxhEtOo https://youtu.be/T6gxWVYoGzs https://youtu.be/3vjResvN280 https://issuu.com/beescoop/docs/pre_sensation_ny-2014
Dalmacija EKO	Croatia	Public farmers' market	http://www.dalmacijaeko.hr/	11.01.2021 18:45, WhatsApp Site visit 2017	https://www.facebook.com/dalmacijaeko/ https://youtu.be/a5QpBZfPk24
Etiquettable	France	Digital App to find circuit court and ethical restaurants	https://etiquettable.eco2initiative.com/	28.12.2020 8h30, Zoom	https://ecotable.fr/fr https://www.ecoco2.com/blog/etiquettable-une-application-pour-salimenter-sans-polluer/ https://presse.ademe.fr/wp-content/uploads/2017/09/Dossier-de-presse-Etiquettable-BD.pdf https://presse.ademe.fr/wp-content/uploads/2017/09/CP-Etiquettable-vdef.pdf https://www.instagram.com/etiquettable/
Himmel & Erde	Germany	farm shop & farm	https://hofmarkt.himmel-und-erde.de/	Website	http://landbau.himmel-und-erde.de/#landbau https://goo.gl/maps/XDygdwDQbdZNh1WG9

					https://goo.gl/maps/YP1dT8XoEcJGs1xc6
Los Perros	Sweden	Urban farm + shop	https://www.losperrosurbanfarming.com/ https://www.flaxmalm.com/	30.02.2020 Radio Interview Instagram Website Youtube	https://www.instagram.com/losperrosurbanfarming/ https://www.facebook.com/losperrosurbanfarming https://podcasts.apple.com/se/podcast/farm-small-farm-smart/id1271270819?l=en&i=1000469947471 https://youtu.be/3i2C1rsUoPA https://youtu.be/XSzM7eQRiL0 https://youtu.be/p8MPkqdE8TY
Metro	Bulgaria	Supermarket chain	https://www.eurocommerce.eu/media/156663/METRO_Best-Practice-Projects.pdf	Existing case study, company CSR report, site visit 2018	https://youtu.be/LdiVfS1Xd7c https://view.ceros.com/economedia/metro-01-1-1-1-1-1-1/p/1 http://bccbi.bg/index.php/news-events/news-e/item/1188-grown-with-care-in-bulgaria-initiative-for-direct-access-of-the-bulgarian-fruit-vegetable-and-meat-producers-to-the-trade-chains https://www.researchgate.net/profile/Marko_Markov/publication/320346427_Short_food_supply_chains_in_Bulgaria_A_particular_reference_to_marketplaces_in_Sofia/links/59df281ea6fdccfcfa312d8/Short-food-supply-chains-in-Bulgaria-

					A-particular-reference-to-marketplaces-in-Sofia.pdf
Sistema Participativo de Garantía-Ecollaures	Spain	Participatory guarantee system	www.ecollaures.org	16.01.2020 10h00, Telephone	http://aixadacomeixida.wixsite.com/aixadacomeixida/spg-ecollaures https://cerai.org/jornada-de-convivencia-del-sistema-participativo-de-garantia-spg-ecollaures/ https://www.hortdecarmen.es/el-spg-ecollaures/ https://www.ecoturis.net/spg-ecollaures/ http://vorasenda.es/ecollaures-spg-garantia-de-calidad-ecologica-avalada-por-colectivos-de-labradores-y-consumidores/ https://vimeo.com/85039675 http://www.biosegura.es/la-voz-del-viento-semillas-de-transicion/ https://www.youtube.com/watch?v=K8xWfgIQfvs https://vimeo.com/172596869
Zolle	Italy	Solidarity purchasing group	https://zolle.it/	04.01.2020 18h30, Telephone	https://www.facebook.com/Zolle.it/ https://www.instagram.com/le_zolle/ https://www.youtube.com/user/ZolleACasa

					https://www.facebook.com/eadesopedala/ https://www.facebook.com/ilpodericchio/?rf=140242996690926
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Task 5: Final Report

The final report presents the findings emerging from this study of quality assurance schemes across the EU. Specific attention will be paid to highlighting those mechanisms that are particularly effective (or ineffective) at communicating quality and ensuring trust and openness between producers and consumers.

Recommendations for the development of a Hungarian scheme are presented based on the original data collection and analysis.

Appendix B: Kobo Survey Questionnaire

Link to survey: <https://ee.humanitarianresponse.info/vVgcxBXu>

Introduction 1/4

Dear participant: Thank you very much for your interest in participating in this survey, whose objective is to analyze systems of quality assessment and transparency in short food supply chains across the European Union.

Introduction 2/4

REMINDER: Your participation in this study is voluntary. There is no compensation made for your participation in the study. Any information you may provide will be confidential and will not be shared with any third party. Once the study has been concluded, all information collected from you will be deleted from all storage devices of the LISIS research team. After the conclusion of the study, you may contact LISIS at allison-marie.loconto@inrae.fr and request deletion of your personal data as per GDPR provisions. For more information on your rights according to the GDPR please visit <https://gdpr.eu/>. If you have any questions or concerns, feel free to contact: francisco.garridogarza@gmail.com

Introduction 3/4

This survey consists of a total of 34 questions (plus a few sub-questions) about the profile of your initiative / business / organization in regards to quality assurance system, transparency, stakeholder interactions and economic sustainability performance. The estimated time for completing this survey is 20 minutes.

Introduction 4/4

Please read each question carefully and follow the instructions on each page. Your contribution is highly appreciated.

1. Name of your initiative / business / organization [hereafter referred to as initiative]

2. Year of foundation

e.g. 2007

3. Country

NOTE: If located in more than 2 countries, please select 'Multiple countries' (last option).

Austria
Belgium
Bulgaria
Croatia
Cyprus
Czech Republic
Denmark
Estonia
Finland
France
Germany
Greece
Hungary
Ireland
Italy
Latvia
Lithuania
Luxembourg
Malta
Netherlands
Poland
Portugal
Romania
Slovakia
Slovenia
Spain
Sweden

Multiple countries

3.1. Multiple countries

Select the countries where you have branches and/or representation of your initiative

Austria
Belgium
Bulgaria
Croatia
Cyprus
Czech Republic
Denmark
Estonia
Finland
France
Germany
Greece
Hungary
Ireland
Italy
Latvia
Lithuania
Luxembourg
Malta
Netherlands
Poland
Portugal
Romania
Slovakia
Slovenia
Spain
Sweden

4. How many stores, branches or service points does your initiative have?

Choose 1 answer.

1
2
3
4
5

6 (or more)

More than 6 locations?

Please provide the 6 main/top in the following pinpoint questions.

Location

Please provide the GPS coordinates.

5. What role does your initiative perform in the value chain?

Choose 1 answer.

Producer
Intermediary (e.g. dealer, supplier, retailer, seller, promoter, sponsor...)
Both producer and intermediary
Regulator

Certifier

6. Specific activity of your initiative

e.g. farm, retailer, restaurant, farmer's market, specialty shop, supplier, community outreach, promoter, legal adviser/representative, activism, etc..

7. Brief description of your initiative (in less than 250 words)

e.g. functions, activities, products & services, mission, principles, objectives, etc..

8. Type of legal entity

Choose 1 answer.

- Ltd (limited company/corporation)
- PLC (publicly limited company)
- Cooperative
- Non-governmental organization (NGO)
- Ad hoc committee (temporarily formed for a specific task/objective)
- No legal entity
- Other

Unknown / prefer not to mention

8.1. If other, please specify:

9. Which quality assurance system do you apply for your products and services?

Choose 1 or more applicable answers.

- Third party certification
- Participatory guarantee system
- Social control
- Consumer-regulated
- B2B (business-to-business)

Other

9.1. If other, please specify:

10. Are there any FORMAL labels on your products and services?

Certification logos by private or public entities such as organic, Fair Trade, geographic denomination, etc..

Yes

No

10.1. Please list the name(s) of the FORMAL label(s):

NOTE: if more than 2 names, please separate with comas (e.g. Organic, Fair Trade, Socially Responsible Company, ...).

10.2. Please briefly describe what each FORMAL label stands for.

e.g. Organic: description. Fair Trade: description. Socially Responsible Company: description.

11. Are there any INFORMAL labels on your products and services?

Labels communicating quality, vision or transparency created by any individual or entity not related to private certifiers or public authorities.

Yes

No

11.1. Please list the names of the INFORMAL labels:

NOTE: if more than 2 names, please separate with comas (e.g. Shared profit, Solidarity economy, ...).

11.2. Please briefly describe what each INFORMAL label stands for.

e.g. Shared profit: description. Solidarity economy: description.

a. Which of the following entities are certified by the labels you listed above?

Choose 1 or more applicable answers.

- Product
- Service
- Person
- Initiative, business or organization

Other

a.1. If other, please specify:

b. Who pays for the certification?

c. What services or processes are included in the certification fee?

d. How much does the certification cost (in Euros)?

12. Who participate(s) in the quality assurance process?

Choose 1 or more applicable answers.

- Producers
- Consumers
- Retailers / client businesses
- NGOs
- Private certifiers
- Public authorities

Other

12.1. If other, please specify:

13. Are there any laboratory tests required by the quality assurance scheme?

- Yes
- No

Do not know

13.1. Please specify which tests, standards:

e.g. soil quality, food safety, residue limits, nutrition facts, etc..

14. (If applicable) Please describe the mechanisms you use to get consumer feedback about quality.

15. Are there any weaknesses in your initiative's business model that can lead to cheating?

- Yes
- No

Unable to answer

15.1. Please describe the weaknesses:

16. (If applicable) Please describe the type of agriculture used to produce your products?

What agricultural design, cropping system, resources and labor used?

17. (If applicable) Who is involved in the PRODUCTION?

18. (If applicable) Who is involved in the SUPPLY?

19. (If applicable) Who is involved in the SALES?

20. How would you describe the length of your supply chain?

Choose 1 answer.

- Short
- Medium

Long

21. How many intermediaries are between the producer and the final consumer?

22. Is there a spokesperson, mascot, or symbol that is used to create a personal connection with consumers?

- Yes

No

22.1. Please explain what is used to create the connection with consumers:

e.g. spokesperson, mascot, advertiser, promoter, etc..

23. How is quality checked from in your 'farm-to-fork' traceability process? (if known)

24. Can your products be traced 'farm-to-fork' ?

- Yes
- No

Do not know

24.1. How is it traced?

With what type of proof? e.g. documents, site visits, etc..

24.1. Why cannot be traced?

25. Which nodes of the supply chain are checked? (if known)

26. What are the top 5 keywords that best describe the mission of your initiative?

e.g. local, traditional, sustainable, healthy, biodiverse, green...

27. Is there a digital/IT component to the system?

e.g. online platform, application, social media page, etc..

- Yes

No

27.1. How does that digital/IT component work?

27.2. What function does it have for quality assurance?

28. How would you categorize your consumers/clients?

Choose 1 answer.

- Highly frequent
- Loyal (members)
- Regular
- Occasional
- Infrequent
- Do not know

Unable to answer

29. Can you estimate the average rate of your monthly sales?

- Yes
- No

Unable to answer

29.1. Please provide the estimated sales average (euros/month).

30. Based on your growth prospects, how would you rank the following priorities?

Rank from highest to lowest priority.

- 1st priority:
- 2nd priority:
- 3rd priority:
- 4th priority:

Consumer solvency, Higher production capacity, Effective marketing, Logistics improvement

31. Does your initiative set a fair price that is established by, and through negotiation between, the different parties to the exchange (members, producers, consumer)?

- Yes. Our initiative has set up a transparent and participatory process to enable all actors to participate in setting the prices.
- Yes. The price is set in a transparent and participatory manner among several key actors, but not with all value chain actors.
- The price is transparent and explained, but it is determined by only one actor.
- We are trying to implement this approach.

No. We have other priorities.

32. Do you know how the finances are divided between the funding of the initiatives activities and the allocation of profits?

- Yes. We know all of the stakeholders who fund the initiative and the destination of profits; it is stipulated in our agreement.
- Yes. We have this information but there is no official partnership agreement that obliges us to be informed.
- Yes. We have access to some of this information in an inconsistent manner.
- We know how the initiative is funded, but we do not know where the profits go.

No. We do not have this information.

33. Does the management of your initiative bring efficiency, lower costs and ensure greater affordability of your products or services; and does it promote the longevity of the collaboration between the different value chain actors?

- Yes. Thanks to good governance and long-term collaboration, there are real economic gains that benefit all stakeholders.
- Yes. There are efficiency gains due to good management and governance, but stakeholder benefits need improvement.
- We are working on our management and governance to improve our economic efficiency.
- No. Our economic model is focused on strengthening the local food system, but we face constraints for achieving efficiency improvements and equitably shared benefits. There is no long-term collaboration.

No. We are not seeking financial efficiency or organizational sustainability.

34. Does the economic model of your initiative enable financial independence?

- Yes. The capital is collective (resulting from crowdfunding or employees, cooperative members, citizen-consumers, etc.), which guarantees that the initiative is financially autonomous.
- Yes. Capital is managed collectively between different stakeholders (citizens, local authorities, businesses ...) and provides the initiative some form of financial autonomy.
- Yes. The collaboration and dialogue within the initiative promotes financial independence as a goal.
- No. The capital comes mainly from external actors (companies, private foundations...) or a specific donor, which gives little or no financial autonomy.

No. Achieving financial autonomy of the initiative is not an objective.

End of the Survey!

Thank you very much for your participation.

Would you like to be contacted by us to participate (again) in future research projects on sustainable agri-food domains, local gastronomies, short supply chains, etc.?

Yes

No

Please provide an e-mail address which you would like to be contacted:

Comments

Thank you!

All your inputs are of great importance to our study, and will remain confidential. It will be used exclusively for data analysis purposes, and will not be shared with no one. We will always be available upon your request to answer any further questions or clarifications. We wish you success in your project.

